INTRODUCTION

Since 2000 In Nigeria, the Disability Rights Education and Defence Fund have collected country-based laws that protect the rights of individuals with disabilities. Between that period and now there has been a rise in the inclusion of the physically challenged in our public and private buildings, these can be said to be a good and welcome idea in the society, however, much still needs to be done. The idea of having an inclusive design does not mean that we have a section of the building where the physically fit stay at a place and the physically challenged are sectioned elsewhere (Otto, 1998). That is a misconception that needs to be cleared. In building terms, Inclusion is a term used by people with disabilities and other disability rights advocates for the idea that all people should freely, openly and without pity accommodate any person with a disability without restrictions or limitations of any kind (Otto, 1998). Accessibility refers to how available something is to everyone. When something is accessible, everyone has the opportunity to use it or to participate in it. Inclusive building design can then be said to be the design that is accessible to and for every kind of person inspite of their physical, social or economic state (Lacey, 2002). Achieving this on paper will require a deep and critical look at the various types of disabled persons with a focus to take care of their needs within the same building as those who are not physically challenged. Their movements and their activities must not conflict themselves. In other words, there must be a good flow within the people to take care of everyone's needs.

ASSESSIBILITY, INCLUSION AND CIRCULATION

Accessibility means that everyone has equal access to the built environment with no discrimination based on one's level of ability. It can be defined as being the opportunity that an individual, at any given location and of any given ability, possesses to take part in a particular activity or a set of activities within the built environment (Jones, 1975). It implies that the built environment must be truly usable for all.

Accessibility happens when we discover and break down the barriers and create opportunities for everyone to participate fully in their school and community. If everyone cannot use something, such as a door, staircase or hallway, it is considered inaccessible. Something that can be used by everyone, such as an automatic door, a ramp or wide hallway, is considered accessible. People often take for granted how easy it is to enter a room, eat at a restaurant, play in a park, go for a walk or even visit a washroom. For a person with a disability, these daily tasks and outings can be very difficult if there is limited or no accessibility to them.

WHY IS ACCESSIBILITY IMPORTANT?

Out of every 100 people in a community, there could be as many as 15 who have a disability. If this is expanded, it means that a good number of people in the city or country have a form of one disability or the other. Despite this large number, there continues to be a lack of

CamScanner

understanding of and concern about accessibility. Without a continued effort to promote full accessibility, the basic rights of too many people will continue to be neglected (Bar, 1999).

Every society is known for its value as well as equality and human rights. It is believed that everyone who obeys the law and plays by the rules of society should be given these equal rights. Having equal rights implies that everyone – no matter what cultural, religious, ethnic or physical differences there are – has an equal opportunity to experience everything society has to offer. This means the opportunity to go to school, enjoy popular forms of entertainment and even something as simple as taking a walk down the street. In other words, everyone has the right to access and to enjoy the same places, events, services and products as everyone else (Richard, 2000). When those basic rights are unavailable, it means that basic human rights are being violated.Accessibility, then, ensures that everyone within a community has access to the same activities and opportunities.

Inclusion is a term used by people with disabilities and other disability rights advocates for the idea that all people should freely, openly and without pity accommodate any person with a disability without restrictions or limitations of any kind (Barnes, Oliver, Barton (2002). Although disability rights has historically existed as a relatively cohesive movement, the movement centered on inclusion has only recently begun to take shape and position itself in the eye of the general public (Jones, 1975).

The Findings Are Explored Under Two Sections:

1. External design features, which will include different elements of the external built environment in schools, and highlights key areas for consideration in relation to accessibility such as Arrival and Departure areas, external circulation routes, car ports and ramps, entrance porch as well as walkways.

2. Internal design features, which includes elements such as doorways and corridors, flooring, ramps, stairs and lift.

EXTERNAL DESIGN FEATURES

Car Parks

- Cars are the only practical method of transport for some disabled people, whether they drive themselves or ride with someone else; therefore it is vital to provide accessible parking with unhindered access to building entrances.
- The car park space for disabled people should be conveniently located and clearly signed.

CamScanner

Walkways and Building Entrances

Wheelchair access to the walkways can be made with a minimum of 1.50m. Two people can sit closed to each other.

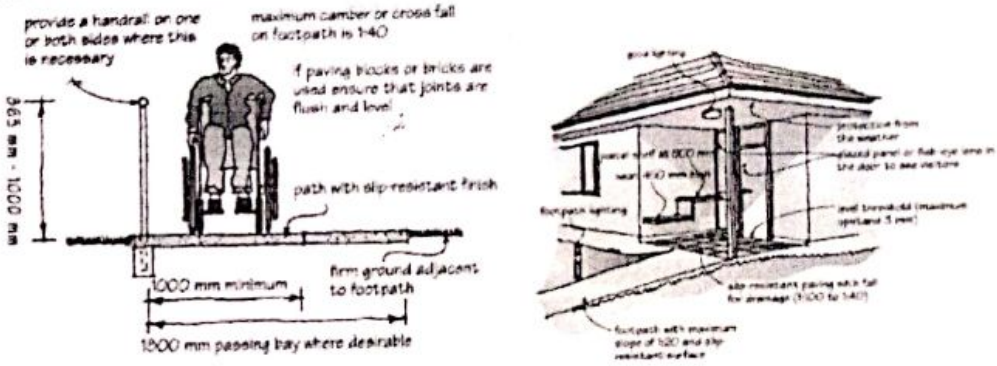

Plate 1. Source: Architecture (AIA); 2004

Access into Building

The elements which make the entrance accessible are: A good lighting, A parcel shelf at 99000, footpath/ with light, protection from the weather, glazed panel or fish-eye lens in the door to see visit, level threshold (maximum up stand 3mm), slip-resistant paving with fall for drainage (1:100 to 1:40), footpath with maximum slope of 1:20 and slip-resistant surface Special me measurement are required to open the door.

INTERNAL DESIGN FEATURES

Lifts

Besides the minimum measurement of 1.10 m (width) x 1.40 m (depth), the lifts shall have control buttons outside and within the lift cage. Control buttons shall be placed approximately 1.0 m above the floor and minimum 0.5 m from the corners. Door(s) shall be placed at the narrow end(s) of the lift. (If the doors are placed at a right angle to each other, the size of the lift shall be minimum 1.8 x 1.8 m.

Doors

If the door opens outwards, there must be an additional 0.2 m along the facade of the building. The area outside external doors must be flush with the internal floor. The area outside external doors must have tactile markings or be of a different colour from the surrounding surface finish. If the door opens towards the person, there must be no less than 0.5 m on the side of the door opposite its hinged side. Doorsteps may be no more than 25 mm high.

Corridors and Shared Access

The dimensions of an offset hinged door that allows room for a wheelchair user to move beside and through the minimum wide of a corridor is 0,90m which permit to someone

CamScanner

walking to cross or pass over someone in a wheelchair BUT it is not enough for two people crossing in a wheelchair with a standard size of 75 cm. For more comfort, the wide of the corridors can be 1.40m.It is necessary to make some turning diameter of 1,50m in front of the doors, ends of corridors.

STUDY AREA

Federal university of University is located in Bosso Local Government Area. It is the only Federal university in the Niger State. For the purpose of this research, the term "schools" will be used for "faculty". Just so that your understanding is not lost within this discourse. It has two campuses with a total of 6 schools; the temporary site in Bosso and the permanent site in Gidan Kwano. The Bosso campus has only one faculty building. Other schools represented there are the Pre-Degree and IJMB schools. All these eight (8) schools will be assessed based on the topic. It is expected that at the end of this research, the observations and analysis will aid even other non-academic buildings on how the issue of wheel chair accessibility should be tackled.

The schools studied include;

1. School of Science and Science Education (SSSE)
2. School of Environmental Technology (SET)
3. School of engineering and Engineering Technology (SEET)
4. School of Information and Communication Technology (SICT)
5. School of Agriculture and Agricultural Technology (SAAT)
6. School of Entrepreneurship and Management Technology (SEMT)
7. The Centre for Remedial Study Hall (CRES)
8. The IJMB Hall.

RESEARCH METHOD

Observation schedules were used in gathering the data. The research encountered limitations from some schools which were locked at certain periods of the day, making access very difficult. To analyse these data obtained, SPSS software was used and the results were displayed using charts and tables.

FINDINGS AND DISCUSSION OF RESULTS

Table 1: the table shows the relationship of each of the faculty buildings to the number of physically-challenged (PC) in them.

CamScanner

LOCATION: ARE THERE P.C. PEOPLE THERE?

		ARE THERE P.C. PEOPLE THERE?		Total
		YES	NO	
LOCATION	SSSE	1	0	1
	CRES HALL	0	1	1
	IJMB HALL	0	1	1
	SET	0	1	1
	SEET	0	1	1
	SICT	0	1	1
	SAAT	0	1	1
	SEMT	0	1	1
Total		1	7	8

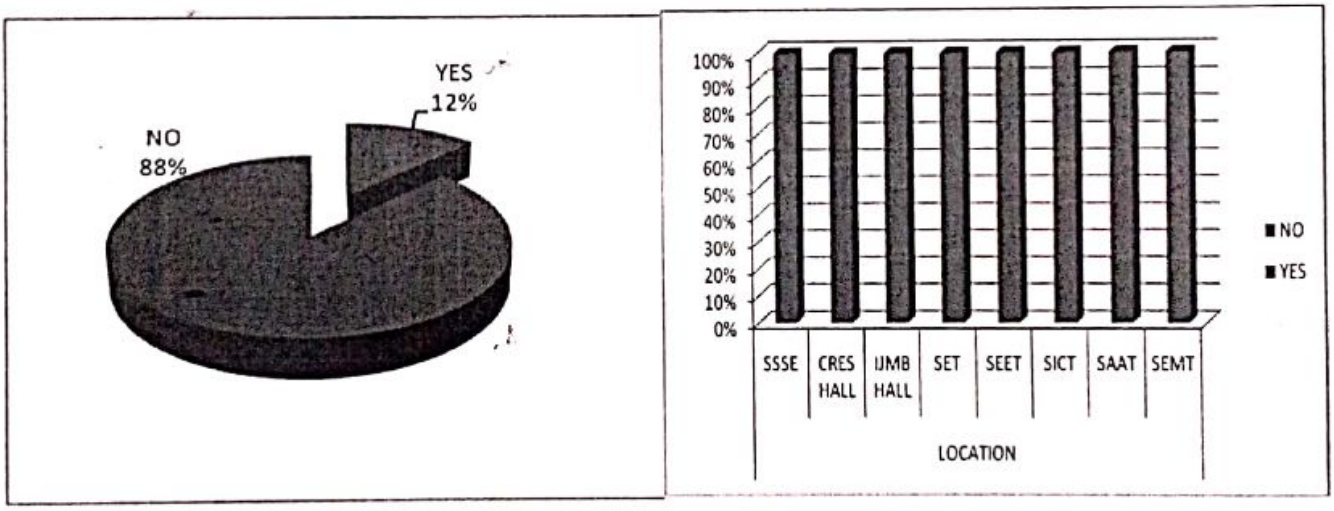

Fig. 1: Number of physically challenged individuals in these faculties.

Table 2: Relationship between the location and the Accessibility of the Entrance.**LOCATION**

IS THE ENTRANCE ACCESSIBLE?

	IS THE ENTRANCE ACCESSIBLE?	Total

		YES	NO	
LOCATIO	SSSE	0	1	1
N	CRES HALL	0	1	1
	IJMB HALL	0	1	1
	SET	1	0	1
	SEET	1	0	1
	SICT	1	0	1
	SAAT	0	1	1
	SEMT	0	1	1
Total		3	5	8

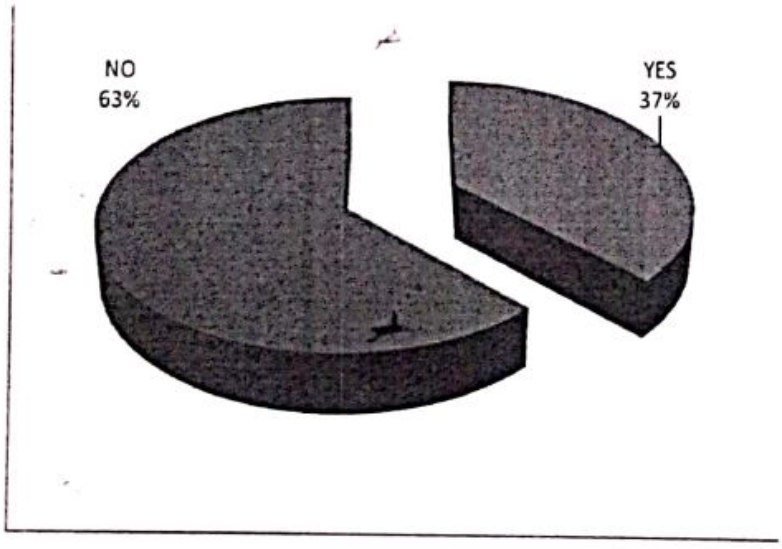

Fig. 2: Picture showing the impact of accessibility on each of the schools.

There is a large percentage of schoolshere which do not have clear entrances for wheel chair users. Only 37% have entranrces that can allow simple assess of wheelchairs. The other 63% will have factors like; high kerbs at entrances, no ramps at entranaces and, inadequatedoor width.

Checking The Availabliliy Of Ramps In Each Of The Schools.

CamScanner

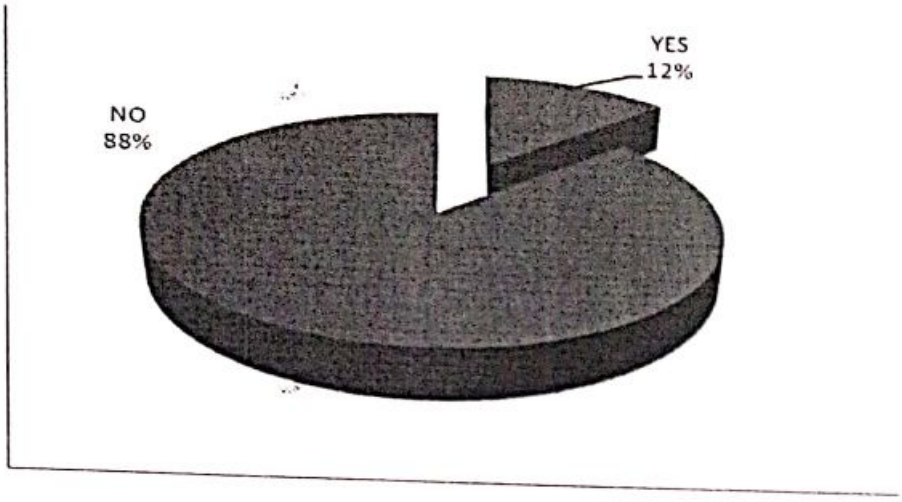

Fig.3: The piechart above represents the analysis of the percentage of ramp availablility in each school buildings.

88% of the schools do not have ramps there. This shows the alarming rate at which we are excluding the physically challenged from our schooling sysytem. If the situation is this way in fut minna where a large number of these school buildings were built more than a decade ago, remains to be seen how other older schools will fare. This analysis has shown that architects are faced with an enormous task of designing and constructing more inclusive school buidings.

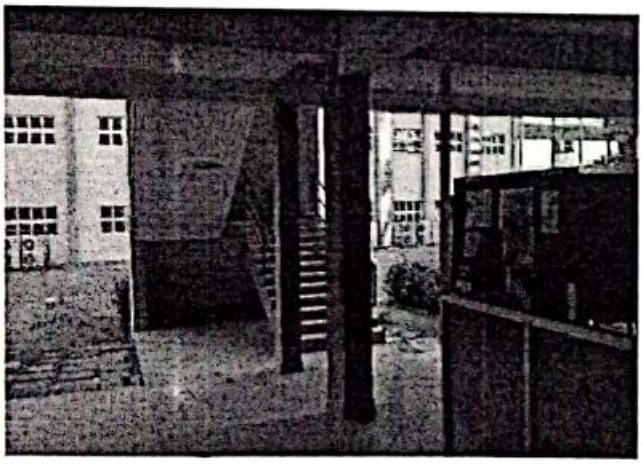

Plate 2.School of Environmental Tech.
steep)
Source : Reseacher's fieldwork 2015

Plate3.Ramp at the School of Science and Science Tech (Too

CamScanner

Table3: table representing the level of obstructions at the premises.

LOCATION * ARE THERE OBSTRUCTIONS LOCATED IN THE PREMISES?

		ARE THERE OBSTRUCTIONS LOCATED IN THE PREMISES?		Total
		YES	NO	
LOCATION	SSSE	0	1	1
	CRES HALL	1	0	1
	IJMB HALL	1	0	1
	SET	1	0	1
	SEET	1	0	1
	SICT	0	1	1
	SAAT	1	0	1
	SEMT	0	1	1
Total		5	3	8

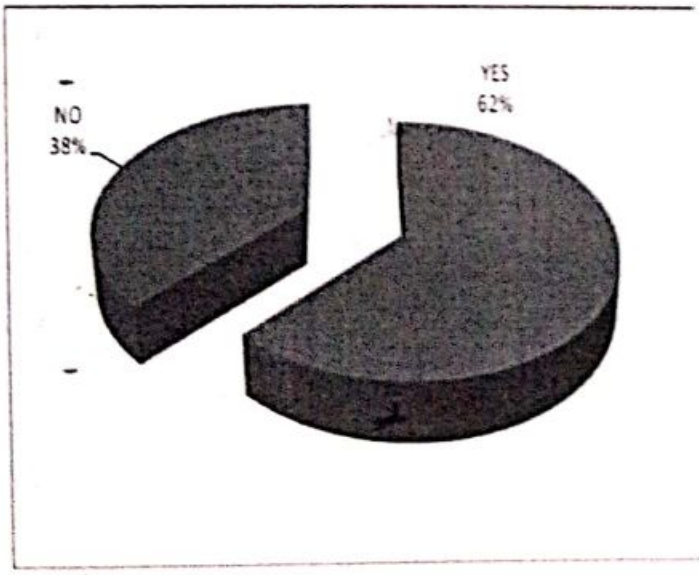

Fig. 4: Chart representing the level of obstructions at the premises.
Soure: Researcher's fieldwork 2015

CamScanner

The analysis carried out has shown that only 38% of the schools assessed do not have obstructions at the premises. This tells us that for the remainning 62%, there will be difficulty for wheelchair users to conveniently move around the building. This means that we must ensure that these schoolbuildibgs atttend to these situation but removing such obstructionns.

CONCLUSION

There is a rising need for all inclusiveness designs. It cuts across farther than just school buildings. The concept of inclusion is to create a medium where the physically challenged can stay in, and get to take part in the same activities as those who are not. Looking into a school setup, the aim is to be able to look into the exterior and internal environments. Looking at how the built environment can support the physically challenged. They must have ability to use similar entrances, use same exits, use same classrooms, same toilets and every other part of that school building. From the Research carried out in all the six (6) schools of FUT Minna as well as the CRES Hall and IJMBhalls,four areas of accessibility were critically assessed. The presence of the physically-challenged in these schools, The availability of clear entrances, the availablity of ramps, obstruction objects at entrances.It was discovered that only one school had physically challenged persons. The entrnaces were not clear for easy access for wheel chair users. Ramps were majorly not in those buildigs. Only one school had ramps at 12%. The other 88%didn't. In general, the physically challenged people will still face alot of obstructions eevn when they move within these buildings.

From the summary of the findings this research conducted, it has shown clearly that only 12% of the faculty buildings was able to achieve inclusion in the design of these buildings. Furthermore, this implies that mobility impaired were not taught of while the construction of these buildings were been done, probably becauses most of these buildings were constructed about 15years ago. The school of Information and Communication Technology (SICT) was seen to consider inclusion as well as assessibility for the mobility impaired within the school and this can be attributed also to the fact that it is a new building constructed recently. All of these implies that awareness on effective design consideration for physically challenged in the society is gradually increasing. For all the existing building assessed, elements that aid easy assess and inclusion can still be adopted, and for new buildings, strict guidelines has to be adhered to to include all physically challenged found with University building and the society at large.

CamScanner

REFERENCES

Bar and Galluzzo. (1999). *The accessible school: Universal design for educational settings, Berkeley.*

Barnes, Oliver, Barton. (2002) .*Disability Studies Today. Cambridge: Polity Press USA*

Burnette,G.(1996). *Including Students with Disabilities in General Education Classrooms*: Inclusion, Policy to Practice, 4(3). Retrieved 02/02/2014 from: http: / / www. accesseric. org.

Jones, P. (1975). Accessibility, *Mobility and Travel Need: Some Problems of Definition and*

Measurement, I.B.G. Transport Geography Study Group Conference, University of Birmingham.

Jones, P. (1981). *Accessibility Measures*: Transport and Road Research Laboratory, Berkshire.

Lacey, M. (2002). *Centre of Accessible Environments*; *planning your home for safety and convenience.* London: Centre for Accessible Environments.

Moore, and Gilbert. (1998). *Educating Students with Disabilities in General Education Classrooms, Eugene: University of Oregon.*

Otto, M.(1998). Keeping *Compliant with 504, ADA, and I D E A. School Business Affairs*, Vol 64(12), pg 9–12, 14–16.

Richard, Olsen, (2000), *Summary Guidelines for School Design to Include Children with Disabilities, Center for Architecture and Building Science Research. New Jersey Institute of Technology.*

Riley, R. W. (1999). *Schools as Centers of Community.* Department of Education. Washington. Retrieved 02/02/2014 from: http : //ed. gov/ Speeches

Roy, (2006), *Acoustic Classroom Designs Break Learning Barrier, Commercial Building Products,* retrieved from http://www.cbpmagazine.com, on 12th August 2014

Hazel and Bob, (2005). *Water and sanitation for disabled people and other vulnerable groups: designing services to improve accessibility*. Water Engineering and Development Centre, Loughborough University.

CamScanner