

## AN EXPLORATORY STUDY TO ACCESS BARRIER FREE ENVIRONMENT OF UNIVERSITY PREMISES

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**Abstract:** Every person on earth was having right to live and peruse education. Education is very important tool in our life to shape and to improve a person. Disable people were also the part of society and they have to be promoted for higher education. Disable people definition is very complex and categorization of them are little difficult but still except mentally retarded other disable people can able for higher education. Government of India also reserved the seats for them. So keeping all point in mind this study was conducted to assess the barrier free environment in college premises. Objective of study was to know that at how much extent disable people can easily use their college premises if they enrolled in college. It was conducted in two colleges of Udaipur and each building of colleges was assessed. Data revealed that college premises were not built to assess universally. So there is need to change and adopt some corrective measures in built environment so that disable people also actively participate in education system.

**Keywords:** Disability, barrier free environment, special need people, built environment.

### Introduction

Human is beautiful in his own way. Persons with disabilities have remained an invisible, silent & marginal part of the population for long and have been subject to exclusion, discrimination & inhumane treatment; a person with disability was viewed as an individual who 'lacked' something naturally which justified such exclusion and isolation in society. As we know disable people are one of them who are facing problem in performing some or all activity normally. These are also the part of society. Therefore neglecting their needs and necessary requirements were not acceptable. Apart from this these were also a human resources and barrier in their life also affecting our nation's progress. The development of people with disabilities (PWDs) is crucial for national development. Since the human resource of disabled is also equally important as the human resource development of abled people<sup>1</sup>. If we are started taking them as important part of society rather than challenge to

organization and government, this will definitely change the status of disable people in society.

PWDs have been mostly seen as people that under privilege and need to be taken care of and protected. Even initial policies and programs of PWDs were based on the approaches of institutionalization and passive community care which encouraged their dependence. But it developed constrains for PWDs because they have to face full of built barrier in their surroundings while participating actively in socioeconomic activities<sup>2</sup>. So it is important that the built up environment be barrier-free and be designed to meet all requirements in a way that all people can use it equally.

An accessible/ barrier free environment is one, which allows people to move around safely, independently, and without restriction. Also it creates access to livelihoods, education, employments which basic elements of quality of life. If our complete environment is designed in such a way that every person can access it without any difficulty or requirement of adaptation, we will be able to call it a barrier-free and universally accessible environment<sup>3</sup>.

### **Disability**

India is the home of 1.21 billion people and 2,10,68,557 people are suffering from one or the other type of disability (Census 2011). This comprise of 2.21% of the total population. “Disability” in relation to a person, means a substantial limitation in the ability of the person to carry on a profession, business or occupation or to participate in social or cultural life by reason of an enduring physical, sensory, mental health or intellectual impairment<sup>4</sup>.

Types of disability are defined using only one aspect of disability, such as impairments – sensory, physical, mental, and intellectual – and at other times they conflate health conditions with disability. People with chronic health conditions, communication difficulties, and other impairments may not be included in these estimates, despite encountering difficulties in everyday life. According to ICF disability is very wide term and it requires lot of improved categorization. In ICF, problem with human functioning are divided in three interconnected areas<sup>5</sup>:

- **Impairments** are problems in body function or alterations in body structure – for example, paralysis or blindness;
- **Activity limitations** are difficulties in executing activities – for example, walking or eating;
- **Participation restrictions** are problems with involvement in any area of life – for example, facing discrimination in employment or transportation.

Although Laws related to Special education or children with special needs (CWSN) exemplify the notion of 'disability' being a natural phenomenon that sees students with disability not as objects that are broken and need fixing, but as individuals who are essentially unique and function differently from others. A disability cannot and must never be allowed to "define a person's potential, humanity or character."<sup>6</sup>

Whereas, According to Indian law "person with disabilities" would means to include anyone who suffers a minimum 40 per cent disability and must be certified by medical authority specified by the government<sup>7</sup>. This will restrict those who were below 40 per cent and felt discomfort while performing activity and using their surroundings. They also have a right to live with dignity and enjoy their life. They have a right to get education. Even government has already allotted reservation for them so that they can easily acquire seats in colleges for higher education and make their life vulnerable. It's a step forward to encourage them towards higher education and motivate them for strengthen their positive traits and abilities. So there must be a need to develop barrier free environment that could be universally assessable.

With this view in mind study was conducted to assess the major barrier in build environment of college premises which may be challenging for student with disabilities. After assessment of barriers also provide the feasible recommendation and create awareness among people about barrier free environment so that everyone can easily access it.

### **Material and Methods**

A descriptive study was conducted to observe barrier in built environment of college premises. Data was collected from two colleges of Udaipur; total 8 building blocks of colleges were observed. A pre-coded observation module were taken from "Planning a Barrier Free Environment" published in 2001. The data was analyzed in terms of frequency and percentage.

### **Results**

Survey was conducted in 2 steps, First a general observation survey conducted to see whether special facilities provided in building and near space for PWDs were present or not. 2<sup>nd</sup> step were to measure their dimensions.

Sl.No	Facilities	Block1	Block2	Block3	Block4	Block5	Block6	Block7	Block8
1.	Parking Space	√	√	√	√	√	√	√	√
2.	Disable Parking sign	×	×	×	×	×	×	×	×
3.	Main Entrance Accessible	×	×	×	×	×	×	√	×
4.	Ramp in front of main entrance	√	×	×	×	×	×	√	×
5.	Railing near ramp for support	√	×	×	×	×	×	×	×
6.	Classroom Door width Accessible	√	√	√	√	√	√	√	√
7.	Special Setting Arrangement	×	×	×	×	√	×	×	×
8.	Special Toilet	×	×	×	×	×	×	×	×

Every building in colleges was observed precisely. The data depict that every building block having sufficient car parking space but not a single space having sign or specific lot for PWDs. Main entrance of every building block was having staircase and no side rail for support. Single building was having ramp facility to access main entrance door, whereas rest of all building was not properly assessable for wheelchair person or having problem to walk in staircase. Not a single college having toilet facilities for them even existing toilets door width was less than 2.5 ft. while observing the classes it was found that only one college was having special separate sitting arrangement for PWDs. However in other colleges, classroom's sitting design were not universally acceptable. It was measured that door width was sufficient to pass wheelchair. Data showed than in all colleges corridors were having sufficient space to move wheelchair. After assessing the some common facilities in colleges it was concluded that only some minor adding of design style can help to make college universally acceptable design which is barrier free space for disable people. This study raises a many question like how barrier free space can be developed. Following suggestion and recommendation were given to authority of college's further action and make college premises barrier free.

### Suggestions

- The following points must be kept in consideration while constructing a ramp.
  - Who's the primary user?
  - What type of assistive device does the person use (cane, crutches, walker, manual or electric wheelchair, motorized 3-wheel cart)?
  - Will the person's abilities change?
  - Will the person use the ramp independently or will help be needed?
  - Who will provide help and what are that person's abilities?
  - Which entryway is best for the ramp? Consider the inside as well as outside. Narrow doors or hallways can prevent access to a doorway from the inside.
  - Placement of existing door handles and swings direction of doors.
  - Where does the person want to go most often (garage, driveway, front sidewalk)?
- Where is the best place to access transportation?
- If there is an attached garage, can a ramp be placed inside?
  - How will the ramp affect available yard space?
  - Are there barriers such as trees, shrubs, poles, etc.?
  - How will the ramp appear?
  - What are the local zoning requirements for lot lines and setbacks?

### Recommendation

Building a new area for them is impossible. But little efforts can be done to add necessary requirement to fulfill their barrier free environment need. Present study revealed many issues which must be taken into consideration for improving the premises. Some recommendations were suggested so that it can be adopted without much changing present structure.

**Main Entrance:** it should be accessible so that they can enter in college building. There is need to introduce ramp along with railing for support to walk (fig1).



**Fig 1:** Ramp along with hand rails

In fig 1, it was observed that ramp slope was incorrect. Moreover no handrail support was there. Whereas the correct form of ramp along with handrail support was depicted in 2<sup>nd</sup> pic. The minimum width of ramp should be 1200mm and not steeper than 1:12, whereas landing of ramp should be constant and safe. If possible make two pathways (ramp and staircase both) for excess entrance (fig2).



**Fig 2:** staircase along with to excess main entrance

**Toilet and washroom Facility:** There should be at least one accessible toilet for them. Minimum internal dimension of 1750mm\*1750mm. Door width must be accessible for

wheelchair that is not less than 900mm. As per safety concern handrails must installed in wall for support.

**Parking Area:** it was observed that sufficient space was available in parking, but no sign or reserve space for them. So incorporating sign and symbol at their reverse lot will be beneficial for them.



**Classroom:** Data revealed that sufficient space available in classrooms but no special sitting arrangement were there. So just adding special sitting facility for them can make it universally accessible classroom.

**Other Facility:** water cooler tap height was high so one more tap can be installed at lower height so that they can access water facility of college. Pathway and corridor space was sufficient no need for other special requirement.

### Conclusion

Disable people also have right to educate so giving them barrier free environment was also their right. Just adding simple measures can help them to fulfill their dreams to take part in higher education. They were also a part for our society we can neglect them while thinking about overall development of youth. There is need to focus on more toward building universally accessible structure which may lead to promote disable people to access their surrounding with depending on others.

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