

# Creating a Barrier-Free Environment in Inclusive Education for Children with Disabilities

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## **Abstract:**

This journal addresses the imperative of creating barrier-free environments within inclusive educational settings to facilitate the full participation and integration of children with disabilities. It explores the concept of barrier-free design, identifies common barriers encountered by children with disabilities in educational settings, and proposes strategies to promote inclusivity and accessibility for all learners.

Inclusive education aims to provide equitable opportunities for all students, including those with disabilities, by fostering environments that accommodate diverse learning needs. However, physical, social, and attitudinal barriers often hinder the full participation of children with disabilities in educational settings. This journal examines the importance of creating barrier-free environments within inclusive education and presents practical approaches to address and eliminate barriers, thereby promoting accessibility, inclusion, and equitable learning opportunities for all students.

**Understanding Barrier-Free Design:** Barrier-free design involves creating environments that are accessible and usable by all individuals, regardless of their abilities or disabilities. It encompasses physical, sensory, cognitive, and social dimensions, ensuring that spaces, facilities, and materials are designed with the diverse needs of users in mind. Key principles of barrier-free design include universal design, equitable access, and removal of discriminatory barriers, emphasizing the importance of proactive measures to prevent exclusion and promote inclusivity.

**Common Barriers in Inclusive Education:** Children with disabilities often encounter various barriers within educational settings that impede their full participation and integration. Physical barriers, such as inaccessible buildings, classrooms, and facilities, can restrict mobility and hinder access to learning environments. Social barriers, including stigma, discrimination, and lack of awareness, may create barriers to social inclusion and peer acceptance.

## INTRODUCTION

**BARRIER FREE ENVIRONMENT (BFE):** Barrier Free Environment (BFE) is the environment where all things are accessible to all children. Barrier Free Environment (BFE) is not limited to the only physical structure it goes beyond the instruction, content and attitudes. With the help of Barrier Free Environment (BFE) we make content accessible to all Children with Disabilities (CwDs) using multiple means of presentation. We make physical environment to move independently in school campus. For successful inclusion the main barrier is attitude.

## INCLUSIVE EDUCATION

Inclusive education differs from the notion of 'integration', which tends to focus more on ensuring disabled children attend mainstream schools rather than on ensuring that these children are learning. Indeed, whether or not disabled children learn in an integrated system is down to them and whatever small efforts teachers and other staff can make, given the demands on their time. When problems arise, blame can therefore be attached to the child and not the teachers or education system. An integrated approach to education suggests that diversity is a problem to be overcome as it is a burden on resources and detracts from the amount of time a teacher can dedicate to other students. By contrast, inclusion is about the child's right to participate and benefit on an equitable basis to their peers. Inclusive approaches stress the duty of schools to adapt and, in principle, accept all children. Resources are used to encourage this participation, rather than to provide additional and separate activities. In this way, diversity in the classroom is embraced and viewed as an asset. Inclusive education values and principles should promote rather than undermine a flexible approach to tackling the students with diversified learning needs. For example, an inclusive approach to education may ensure the provision of specialized support for disabled children in a mainstream classroom. It is important to remember that ideological rigidity is not conducive to an education system that is genuinely empowering. In certain circumstances, for instance, specialized classes (within the mainstream school) may be beneficial for some students, to facilitate and complement their participation in regular classes. Examples of when this may be appropriate are Braille training and physiotherapy that requires the use of special equipment.

## CHILDREN WITH DISABILITIES (CwDs)

The World Health Organization (WHO) has defined the terms '**Impairment**', '**Disability**' and '**Handicap**' in 1980 through the publication of the International Classification of Impairments, Disabilities and Handicaps (ICIDH), which is a manual of classification relating to the consequences of diseases. The ICIDH proposes the concepts and definitions of Impairment, Disability and Handicap, and discusses the relation between these dimensions. It is based on a linear model (Figure 1) implying progression from disease, impairment and disability to handicap.

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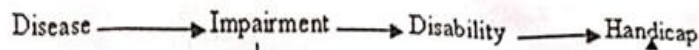


Figure 1: ICIDH Model (WHO 1980)

According to the ICIDH, **Impairment** is any loss or abnormality of psychological, physiological or anatomical structure or functions, generally taken to be at organ level. Impairment is damage to tissue due to disease or trauma. A person who has poor or no vision due to damage to retina or optic nerve may be said to have a visual **impairment**.

Disability has been defined as any restriction or lack of ability (resulting from an impairment) to perform an activity in the manner or within the range considered normal for a human being, generally taken to be at the level of the individual. Disability denotes the consequences of impairment in terms of functional performance and activity by the individual. A person who has an optic nerve or retinal damage would have limitations in performing those tasks that requires the use of eyesight.

The ICIDH defines **Handicap** as a disadvantage for an individual, resulting from an impairment or disability, which limits or prevents fulfillment of a role that is normal (depending on age, sex and social cultural factors) for that individual. There are so many acts which defines the different types of Impairments, Disabilities and Handicapped.

Latest one is Right of Persons with Disabilities 2012 defines 'specified disability' means i. autism spectrum disorder; ii. blindness; iii. cerebral palsy; iv. chronic neurological conditions; v. deaf blindness; vi. hemophilia; vii. hearing impairment; viii. intellectual disability; ix. leprosy cured; x. locomotor disability; xi. low vision; xii. mental illness; xiii. muscular dystrophy; xiv. multiple sclerosis; xv. specific learning disability; xvi. speech and language disability, and xvii. thalassemia and xviii. Multiple disabilities. (RPwD 2012 includes 18 disabilities.)

### OBJECTIVES

- To create Barrier Free Environment for Children with Disabilities by adapting the physical infrastructure in an inclusive education.
- To create Barrier Free Environment for Children with Disabilities by adapting the instruction and content in an inclusive education.
- To create Barrier Free Environment by changing attitude of people towards the Children with Disabilities in an inclusive education.

### OBJECTIVE 1

General strategies for Barrier Free Environment (BFE)

General strategies include access to the physical environment. Which maximum helps to children with physically handicapped. It is also helps to other severe and profound disabilities which are having any other associate conditions. Here are some examples provided to make physical environment accessible all children with disabilities like children with visual impairment, hearing impairment, intellectual Disabilities, children with cerebral palsy and children with multiple disabilities. These are some example based on researcher experiences which are not standard. Adaptations are made in environment according to individual needs of children with disabilities.

1. Visual map of school should be at entrance with specifications and standard symbols.
2. The path from the gate to the school buildings and playground must be clear and leveled.
3. All entrances and doorways in the school buildings should be between minimum 4' to 5' feet wide.
4. All entrances and doorways must be free from doorframe so wheelchair can easily move inside and outside the classroom.
5. The toilet inside the school should be accessible to Children with Special Needs (CWSN). This toilet should be fitted with commode and grab-rails. Toilets should have adapted cleaning devises.
6. The drinking water should be at accessible height to CwSN.
7. Avoid sharp ramps and turns in the walkways. The walkway must be clear of any hung and protruding obstructions such as windows, lights, low branches, flower pots and sign posts etc.
8. A handrail should be provided at all walls, stairs and walking point in the walkway.
9. The corners of the handrails should be bent downwards to avoid injury.
10. Steps should be of equal and even heights.
11. Bright colors (preferably yellow, blue and other) should be used at every change in slope, at the beginning and ending of a staircase for easy recognition.
12. All signage should be in print, visuals and Braille at the readable height (minimum 3 feet) of the children.
13. All the surfaces should have good grips.
14. Natural lighting should be optimized. There should be enough windows to allow adequate ventilation and lighting.

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15. Classroom seating arrangement should be clear and specific so each CwSN can move and seat and reach at their place easily.
16. Safety of all children should be ensured by provision of hazard free environment (broken window panes, broken steps, broken fixture and furniture, unsafe ceilings, etc).
17. The school/ classroom should follow the Universal Design for Learning (UDL).
18. Classroom chairs and tables should be wide and have a proper height.
19. Ramps should be provided with stair at every level.

All above mentioned adaptations make physical and learning environment accessible to the Children with Disabilities.

#### **OBJECTIVE 2-Adapting instructions and content for Teaching Learning Processes**

Adaptations help us to improve the accessibility. Adaptations in teaching Strategies, Teaching Learning Materials, curriculum and assessment and Evaluation make accessible and helps to children with Disabilities to fit in inclusive education. Some are common examples are given below:

1. Availability and accessibility to teaching learning material within the class rooms to be ensured.
2. Ensure participation of CWSN in all curricular and co-curricular activities.
3. Use of peer support effectively to ensure increased participation of CWSN in schools.
4. Use of enabling technologies to meet the needs of CWSN.
5. Adaptations and modifications done to cater the needs of all children with disabilities.

Children with Special Needs (CWSN) have different disabilities with different associate conditions. Children with Disabilities have different learning styles according to their disability and its severity. The strategies of each disability discussed below which can help to develop barrier free environment to children with special needs in inclusive education. Adaptations created according to the individual needs and learning styles of the child.

#### **Strategies for Children with Intellectual difficulties / Mental retardation**

1. Since this section mainly focuses on adaptation in teaching learning processes, the following need to be emphasized:

11. The resource teacher should provide auditory training to make optimum use of the residual hearing of the child.
12. Seating of the child should be such that s/he gets a clear view of teacher's face (for lip reading) as well as the black board.
13. Ensure increased use of pictorial teaching learning materials.
14. Level of difficulty of language needs to be adapted as per the comprehension level of the child.
15. Ensure use of Indian Sign Language with the help of the resource teacher, if required.
16. Children with language acquisition problems should be exempted from the 3-language formula. Sign Language can be used as an option.
17. Sign language can be given as an option under co-curricular activity to enhance peer support.
18. Assessment procedures may include objective type questions, instead of essay type questions for children with difficulties in language acquisition.
19. Extra response time needs to be provided, wherever necessary Children with language difficulties should be exposed to language acquisition and reading soft wares.

#### **Strategies for Children with Visual difficulties**

1. Ensure availability of accessible teaching learning material (Braille, large print, audio, e-text, etc).
2. Making science labs accessible by Braille labeling, tactile charts /diagram.
3. Ensure increased use of verbal instructions/directions while teaching.
4. Ensure availability and use of embossed and tactile TLM (maps, globes, charts, models, diagrams, etc).
5. Availability, training and use of aids and appliances (Braille, Taylor frame, white cane, abacus, low vision aids, magnifiers, etc) should be ensured.
6. Availability and training in screen- reading and scanning softwares should be done.
7. Training in daily living skills, orientation & mobility (like- human guide technique) must be provided to children with seeing difficulties, as per the needs.
8. Ensure effective orientation of children with seeing difficulties in school environment with active involvement of peers.
9. Proper training to be imparted to children with low vision in making optimum use of residual vision with the help of resource teacher.

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10. The school environment including the walkways should be safe and free of all obstructions.
11. Warning strips/textures to be provided before the beginning of steps/kerbs etc so that children with visual impairment do not have an accidental fall.
12. Seating of a child with low vision should be such that s/he gets a clear view of teacher's face as well as the black board.

### Strategies for Children with Multiple disabilities

1. Availability training and use of appropriate aids and appliances should be ensured.
2. Access to communication and information in the required language through interpreters, electronic devices, etc. should be ensured.
3. Information to be provided in appropriate format (Braille, sign language, e-text, large print, tactile, audio-visual, etc).
4. Teaching needs to be more application oriented, experiential and practical for this group of children.
5. Training in mobility and daily living skills should be provided with support of resource teacher/parents/peers.
6. Effective use of peer support to enhance communication and mobility skills.
7. Use of appropriate technology, technological aids and software, like Pac Mate for deaf-blind, should be encouraged.

### OBJECTIVE-3 CHANGING ATTITUDE OF PEOPLE TOWARDS CHILDREN

The main hurdle in inclusive education is the attitude of people towards Children with Disabilities. The history of attitudinal changes starts from Killed, Segregated, Amusement, Cruel, Super Natural power, Charity, Rights or law, Integration, Issue of right no charity, Over protection, Inclusion and Self Advocacy. Still people don't have a positive attitude towards children with Disabilities; they have the different superstitions about these children. To change the attitude of Children with Disabilities we do some activities these are:

1. Sensitization about disabilities.
2. Awareness camps
3. Rallies
4. Advertisement through Multi-media
5. Posters
6. Awareness about causes and prevention of disability.

## CONCLUSION

Barrier Free Environment (BFE) helps Children with Disabilities to work or achieve the up to the mark in their respective class, activities, and academic area. Barrier Free Environment (BFE) helps them to move independently in their physical environment. This also helps in other activities like; Activities of Daily Leaving (ADL), Mobility, Curricular and Co-curricular activities. Its help them to learn effectively in regular classes and most important barrier for inclusion is attitude. By conducting awareness programmes we can improve the acceptance about Children with Disabilities in society and school.

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