

Inclusive

School

Assistive Technology in  
Inclusive Education in  
Special Reference to  
Computer Accessibility

Submitted To -

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# Assistive Technology

Assistive technology is any kind of technology that can be used to enhance that functional independence of a person with a disability. Often, for people with disabilities, accomplishing daily tasks such as talking with friends, going to school and work or participating in recreational activities is a challenge.

Assistive technology devices are the tools to help to overcome those challenges and enable people living with disabilities to enhance their quality of life and lead more independent life. Assistive technology can be anything from a simple device such as magnifying glass, to complex device such as computerized communication system. It can be big - an automated van lift for a wheelchair, or small - a velcro attached grip attached to a pen or fork for eating and writing.



Acc to US Technology related Assistance of Individuals with Disabilities Act a Assistive Technology as any item, piece of equipments, or product system, whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain or improve functional capabilities of individuals with disabilities.

In other words, when we see someone wearing a ~~to~~ hearing aid, using a prosthetic limb, employing speech to text software or other tools, he is using assistive device.

The UK fundation for Assistive Technology provides a more concise definition, namely, 'any product or service designed to enable independence for disabled and other people.'

## Benefits of Assistive Technologies

1. Increase independence and Improve Participation - It helps individuals become mobile, communicate

more effectively, see and hear better and participate more fully in learning activities and communicate more effectively.

## 2. Supports children to access and enjoy their rights

Assistive technologies support children to access and enjoy their rights, do things they value and bridges disparities between children with and without disabilities. It provides the means of access to and participation in educational, social and recreational opportunities empowers greater physical and mental function and improved self esteem & reduces costs for educational services and individual supports.

## Students can better reach their potential

Many disabled children cannot realize their potential in full because of the hurdle created by their disabilities.



For example, the children suffering from speech disabilities cannot express their views or answer to the question to their teachers. But by the help of technology, they could use a portable voice synthesizer to answer the teacher's questions, allowing them to join in right away and ensure they are being taught at a level that suits their abilities.

#### 4. It makes the curriculum available to all -

It gives teachers the ability to convert material so as it can be accessible virtually to everyone. There is a software that enlarges portions of text or programs that will read it out for the visually impaired to enjoy.

#### 5. Better Opportunities for Employment -

An educated child with disability supported by assistive technology will have better opportunities for employment.

This results in less dependence on welfare and social security measures, greater contribution to the country's economy and gross domestic product and a return on investment that goes beyond an individual family to the larger society.

## 6. Supports Social Interactions -

Assistive technology supports social interactions with peers, schoolmates, teachers and other school personnel.

Several examples of Assistive technology that help children with disabilities to have full access, participation and enter into the community and interact with others are:

1. for greater independence with mobility and travel, people with physical disabilities may utilize mobility aids, such as wheelchairs, scooters, and walkers. Adapted car seats and vehicle wheelchair restraints promote



## Safe travel.

2. Hand held GPS devices help persons with visual impairments navigate busy city streets and utilize public transportation.
3. Building modifications at work sites, such as ramps, automatic door openers, grab bars, and wider doorways mean fewer barriers to employment, business & community spaces.
4. Special computer software and hardware such as voice recognition programs and screen enlargement programs, enable persons with mobility and sensory impairments to carry out educational or work related tasks.
5. Education and work aids such as automatic page turners, book holders, and adapted pencil grips enable children to participate in classroom activities.

6. Bowling balls with hand grips and one handed fishing reels are a few examples of how technology can be adapted for spoused activities.

7. Adaptive switches make it possible for a child with limited motor skills to play with toys and games.

8. Accessibly designed movie theaters provide closed captioning and audio description for moviegoers with hearing and visual difficulties.

9. Devices to assist a person with daily living tasks, such as cooking, dressing and grooming are available for people with special needs. For example, a medication dispenser with an alarm can be set to remind a person with memory loss to take daily medication. A person with use of only one hand can use a one handed cutting board and cabinet mounted can opener to cook meals with improved independence and safety.