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Use of Computer Technology to Help Children with Special Needs

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***Abstract*- A huge number of students over the Country can't profit completely from a conventional instructive program because they have disability that disables their capacity to take part in an average classroom condition. For these students, computer technology can assume a particularly critical part. Not exclusively can computer technology encourage a more extensive scope of instructive exercises to meet an assortment of requirements for children with particular learning issue, yet versatile computer technology now exists than can empower even those children with extreme incapacities to wind up plainly dynamic learners in the classroom close by their companions who don't have inabilities. This article gives an outline of the role of computer technology can play in advancing the instruction of children with special needs inside the consistent classroom. For illustration, utilization of computer technology for word preparing, correspondence, inquire about, what's more, interactive media undertakings can help the multiple students with particular learning and enthusiastic scatters stay aware of their nondisabled peers. Computer technology has additionally upgraded the improvement of advanced gadgets that can help the multiple children with more extreme incapacities in conquering an extensive variety of impediments that ruin classroom participation—from discourse and hearing hindrances to visual deficiency what's more serious physical incapacities. Notwithstanding, numerous instructors are not enough the fact that computer technology has the potential to go about as an equalizer by liberating numerous children from their inabilities, the hindrances of deficient preparing and cost should first be overcome before more boundless utilize can turn into a reality.**

***Keywords*-Computer Technology; Children with special needs**

1. COMPUTER TECHNOLOGY

Computer technology is the discipline that studies the foundations of modern computer systems in terms of hardware, software, networks and communications and the relationships between each other.

The first major development in computer technology was in 1946, with a vacuum tube-based computer model that was produced to aid in military efforts. Since the invention of computers and the internet, technology including operating systems, platforms, hardware and software has rapidly advanced. Mobile computing technology has redefined how nations communicate as well as how information is sent and received. From laptops to netbooks to smartphones, e-readers and tablets, the options as of 2014 are endless and mounting. [1]

I. CHILDREN WITH SPECIAL NEEDS

They're children who have an inability or a mix of incapacities that makes learning or different exercises troublesome. Exceptional requirements children incorporate the individuals who have: Mental Retardation, which makes them grow more gradually than other children. Discourse and Language Impairment, for example, an issue conveying everything that needs to be conveyed or understanding others. Physical Disability, for example, vision issue, cerebral paralysis, or different conditions. Learning Disabilities, which mutilate messages from their faculties. Enthusiastic Disabilities, for example, introverted or other behavioral issues. [2]

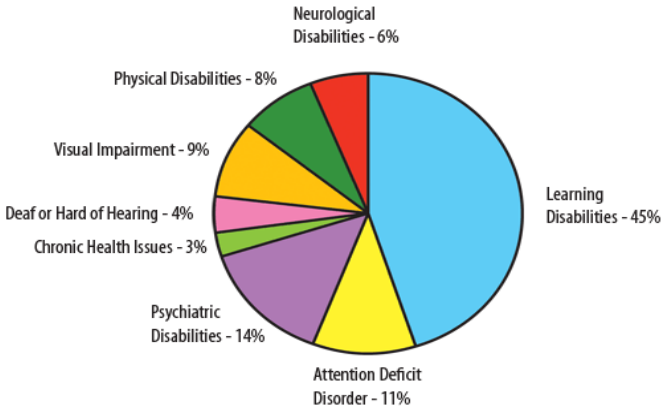

Fig. 1. Rate of Children by Disability

II. Types of children with specific impairment [3]

- Hearing impairment
- Visual impairment
- Speech and language impairment
- Mild learning and behavioural disorders
- Severe physical disability

A. *Children with hearing impairment*

Students with hearing impairment are those who have a hearing misfortune that meddles with their

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capacity to handle etymological data through sound-related channels with or without intensification. This group consist of two distinct classes based entirely on the time of the loss of hearing:

- The congenitally deaf: - Those who are born deaf.
- The adventitiously deaf: - Those who born with normal hearing but in the sense of hearing becomes non- functional later through illness or accident. [4]

1) Devices to assist children with Hearing Impairments

I) Hearing Aids: The listening device is a smaller than expected open address framework worn by the client (audience). It works best in calm, organized settings, where the speaker is close to a couple of feet away and incidental clamor is limited. Listening devices are for the most part accessible in four styles: body-worn, behind-the ear, eyeglass, and in-the-ear. School-age youngsters regularly utilize post auricular portable hearing assistants, which are intended to fit unpretentiously behind the ear. All individuals with hearing misfortune, including "nerve misfortune," can profit to some degree from portable hearing assistants. [5]

II) Recurrence Modulated (FM) Amplification Systems: Also known as a sound-related mentor, the FM transmission gadget makes an immediate connection between the instructor, who wears a mouthpiece, and the child, who wears a hearing help. In this framework, foundation clamor is decreased and the instructor and children are allowed to move around the room.

III) Sound Loops: The sound circle is another kind of enhancement framework. It was acquainted in an endeavor with address the issue to control the sound level of the educator's voice, to keep up consistency in sound-related prompts between home what's more, school, to arrangement all the more adequately with foundation commotion, and to give greatest versatility inside a classroom.

IV) Media transmission Devices for the Deaf (TDDs): The TDD, which empowers a individual with no hearing to make or get phone calls, is the most broadly known media transmission gadget utilized today. The TDD is appended to a phone and takes after a little console with a screen to show the approaching or active messages. Some TDDs have a paper printout to record a changeless duplicate of the discussion. To utilize a TDD, the client sorts a message on the console that is naturally changed over into tones and transmitted via telephone line to another TDD, which changes over the message once more into content shape. In this framework, both the sender and the collector of the message must have entry to the innovation.

V) Infrared Systems: Infrared frameworks transmit perfect, clear stable undetectably to hearing debilitated audience members. They give better hearing in broad daylight places without the bother of wires and ropes, and they experience the ill effects of obstruction radiating from pagers and other outside radio signs, yet they may have restricted openness due to issues identified with line-of-site or separation between the producer and the handset. All things considered, as costs descend, the fame of infrared frameworks is expanding. [5]

A) Children with Visual Impairments

Add up to visual impairment is the powerlessness to tell light from dull, or the aggregate failure to see. Visual weakness or low vision is an extreme decrease in vision that can't be remedied with standard glasses or contact focal points and lessens a man's capacity to work at certain or all undertakings. Lawful visual deficiency (which is really an extreme visual weakness) alludes to a best-adjusted focal vision of 20/200 or more regrettable in the better eye or a visual sharpness of superior to 20/200 however with a visual field no more prominent than 20° [6]

1) Computer Technologies for Children with Visual Impairments

I) Closed-Circuit Television Magnification (CCTV): CCTV is intended to augment any sort of content or realistic material by utilizing a little vertically mounted camcorder with a zoom focal point straightforwardly associated with a screen for showing the picture. The content or realistic material is set under the camera focal point on a sliding perusing stand and the picture is anticipated on the joined video screen. CCTVs permit the client to conform the amplification, differentiate, shine, and center, and to change the foundation show to either dark or white, or now and again, shading. [6]

II) PC Screen Magnification: Most PCs sold today take into account the amplification of the screen using uncommon programming. Regularly, the client can choose a bit of the screen and after that grow that area up to 16 times the first size. In spite of the fact that the client is to some degree hindered by viewing a littler segment of the first screen as the amplification expands, this innovation makes it workable for children with visual weaknesses to utilize PCs in routes like their nondisabled peers. [6]

III) Enlightening Video Services (DVS): DVS innovation embeds an account verbal portrayal of visual components, for example, sets and ensembles, characters' physical portrayals, and outward appearances—into delays in a program's exchange. The greater part of TVs and VCRs produced in the previous six years have been planned with a "moment sound program" (or SAP) switch that can be turned on so that the client can consequently hear expressive video.

IV) Screen Readers: Screen reader programming speaks to what is known as content to speech application, which dissects letters, words, and sentences and changes over them into manufactured or advanced discourse. Today, content to-discourse programming is normal in numerous product bundles, including many word preparing and instructive programming programs in math, perusing, and spelling. In a few occasions, the child can conform the volume, pitch, and speed of

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perusing, and indeed, even pick between a male or a female voice. [10]

B) Technologies for children with Mild Learning and Behavioural Disorders

I) Word Processing Software: The qualities of word preparing that lead to its viability as a learning device for youngsters with exceptional needs are for the most part the same traits that make it compelling for youngsters all in all. For instance, the simplicity of re examining content, delivering perfect and clear content, and feeling a feeling of initiation are every now and again specified as properties of word processors that prompt enhanced composition. [7]

II) Word Prediction Software: Word forecast programming is another case of computer technology that can help students to speak with composed dialect all the more effectively. This product, when utilized in conjunction with customary word preparing programs, lessens the quantity of keystrokes that are required to sort words furthermore, gives help spelling for understudies of different capacity levels.

C) Technologies for Children with Speech and Language Disorders

I) Assistive Listening Devices (ALDs) help amplify the sounds you want to hear, especially where there's a lot of background noise. ALDs can be used with a hearing aid or cochlear implant to help a wearer hear certain sounds better.

II) Augmentative and alternative communication (AAC) devices help people with communication disorders to express themselves. These devices can range from a simple picture board to a computer program that synthesizes speech from text.

III) Alerting devices connect to a doorbell, telephone, or alarm that emits a loud sound or blinking light to let someone with hearing loss know that an event is taking place. [8]

D) Technologies for Children with Severe Physical Disabilities

I) Switches: Switches control the stream of electrical energy to a gadget that the client needs to turn on or off. Switches can be actuated by any piece of the body a man can deliberately and dependably control—for instance, switches are accessible that can be initiated by the utilization of an arm, hand, finger, leg, foot, head, or button.

II) Essential Adaptive Keyboards: Basic console adjustments that help physically debilitated students to utilize PCs incorporate supplanting standard keys with bigger keys that are simpler to see and touch, lessening the quantity of keys on the console, putting in letter enters in sequential request, and giving keys that are splendidly shaded and simple to peruse.[9]

III) Touch-Sensitive Screens: Touch-touchy screens are exceptionally prevalent with youthful PC clients and with people who have extreme formative or physical incapacities. This innovation permits the client to just touch the PC screen to play out a capacity. Many touch-touchy screens come finish with numerous screen overlays that can be utilized to play out an assortment of assignments.

IV) Voice Recognition: Using voice acknowledgment programming, the client can sidestep the console what's more, simply address the PC. By programming the PC with a set of predefined guidelines, the client can control the PC by verbally issuing summons into a mouthpiece. By and large, the unwavering quality of the framework can be upgraded by having the client "prepare" the PC to perceive his or her discourse designs. Voice acknowledgment frameworks permit children to work an assortment of utilization projects, to direct to a word processor, and to enter information into spreadsheets.

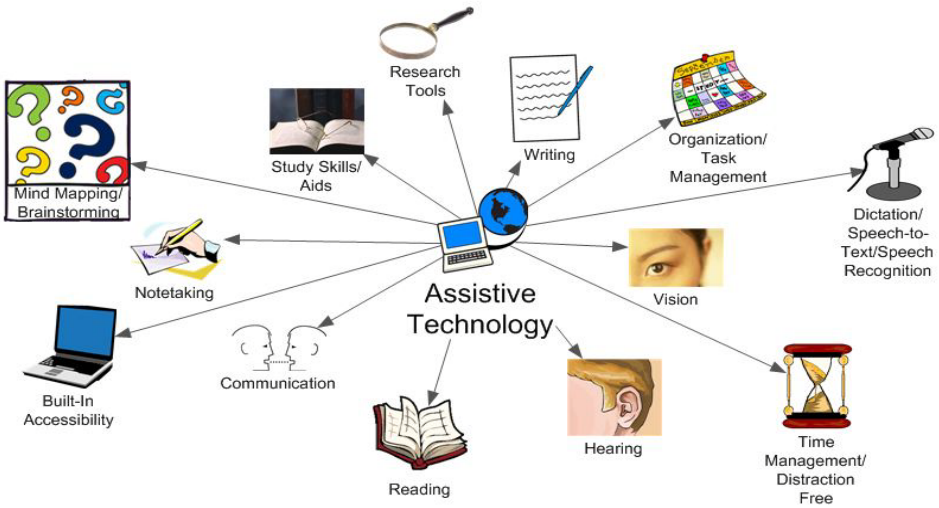

Figure: 2 Use of computer technology to help children with special needs

CONCLUSION

The boundaries of deficient instructor preparing what's more, high cost are problematic—significantly repressing the utilization of innovation in classroom settings—but are not unrealistic. There is most likely innovation has the potential to go about as an equalizer by liberating numerous children from their inability in a way that permits them to accomplish their actual potential. More across the board utilization of innovation would meet both the legitimate necessities and the soul of the laws calling for students with uncommon should be taught at all prohibitive condition. Hence, it is critical for all people who are included in strategy choices with respect to position of students with inabilities, instructor preparing, and the them to accomplish their actual potential. More across the board utilization of innovation would meet both the legitimate necessities and the soul of the laws calling for children with uncommon should be taught at all prohibitive condition. Subsequently, it is essential for all people who are included in strategy choices as to arrangement of children with handicaps, educator preparing, and the subsidizing of instructive advancements to gotten comfortable with the issues encompassing the utilization of innovation for children with handicaps. Cooperating, guardians, educators, executives, and school board individuals, and in addition both children with inabilities and their nondisabled associates, can help make classroom situations in which all children have chances to learn.

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