

Needs of Various Types of Special Resources for Students with Hearing Impairment in the Special Schools

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Abstract:

Resources refer to any object, substance, property or capability that fulfills human needs and desires and which is used by humans to achieve their development, progress and goals. Resources are important for the quality of education of students in schools and effective teaching by teachers. These resources include human resources, physical resources, financial resources and technical resources. These resources create a positive and supportive learning environment in schools and help students to engage more in their studies. The importance of these resources increases even more when the school is special. A special school is an educational institution that provides education to students with severe disabilities or special educational needs who have difficulty in regular schools. These schools use special equipment, trained teachers and teaching methods that meet the specific needs of these students and help them develop their full potential. Hearing impaired students also come under the category of disabled students. Hearing impairment is a complex disability. Considering its complexity, it is necessary to have availability of various types of resources in schools for smooth teaching, training and rehabilitation of hearing impaired children. In this article, the need for various types of resources for schools for hearing impaired children has been presented on the basis of their importance and utility.

Keywords: Human resources, Physical resources, Financial resources, Technical resources, Hearing impairment, Special school, Teaching environment, Technological advancement etc.

1. Introduction:

The term resource generally refers to objects of human use. Any valuable object, which is necessary for achieving a goal, is called a resource. The term ‘resource’ refers to any object present around us which helps us in fulfilling our desires and needs. With the passage of time and technological advancement, any object becomes a resource. Education plays a multidimensional role in the proper use of these resources. Schools are the centers of education. Resources are important for the quality of education of students in schools and effective teaching by teachers. These resources include human resources, physical resources, financial resources and technological resources, which create a positive and supportive learning environment in schools and help students, become more engaged in their studies. The importance of these resources increases even more when the school is special. A special school refers to an educational institution that provides education to students with severe disabilities or special educational needs who have difficulty in regular schools. Resources for a special school are extremely

important to help students succeed, cope with challenges and achieve their full potential. These resources are designed to meet the specific needs of students and include appropriate furniture, educational materials, technology-enhanced equipment and a supportive environment. The use of the right resources enables teachers to teach effectively and promote the overall academic, social and emotional development of students. Special schools may be for students with a single disability or for students with multiple disabilities. The Rights of Persons with Disabilities Act, 2016 describes 21 types of disabilities. These 21 types of disabilities also include the description of hearing impairment. Hearing impairment is a complex disability. Given its complexity, it is necessary to have availability of many types of resources in their schools for smooth teaching, training and rehabilitation of hearing impaired children. The following resources are required for schools for hearing impaired children based on their importance and utility-

(I) Human Resources:

Human resources refer to the workforce of an organization or business, i.e., all its employees. It represents the knowledge, skills and abilities of those people who contribute to achieving the objectives of the organization. In a school context, human resources refer to the administrators, teachers, trainers, employees or all the planners and employed of a school. These are the resources that advance the goals of the school by providing labor. School administrators, teachers, and other employees help in running the school smoothly and shape the learning experience of students. It is the responsibility of the human resource managers of the school to conduct the activities of the school in an effective, legal, judicial and logical manner. Hearing impaired children need many human resources in the school. Among them, teachers trained in special education and special educators are prominent. These teachers and special educators receive special training in the field of hearing impairment. Along with teaching the curriculum to the students, they also help in their all-round development. Sign language translators are required in the school for the ease of sign language of deaf children. These translators are trained in sign language; who convert the spoken and written material or content of a normal person into sign language and make it understandable to the deaf students. Hearing impaired children may have problems related to ears, nose and throat, so an otolaryngologist is arranged. An otolaryngologist treats medical problems related to ears, nose and throat of hearing impaired children and helps in finding the cause of hearing loss. Audiologist, who evaluates the hearing ability of the child, suggests hearing aids, fits and programs them. Also helps in giving auditory training to children. Speech-language pathologist teaches listening and speaking skills to children, especially for those children who use cochlear implants. Auditory-verbal therapists provide auditory-verbal therapy to teach children through listening and oral language, which is important for children using hearing aids or cochlear implants. Ear-mould technician prepares ear moulds of children so that moulds of the child's ear size can be prepared and their hearing aids can fit in the ear. Psychologists and psychiatrists are also needed for timely diagnosis and treatment of psychological problems that develop in hearing impaired children. Thus, many human resources are required in the process of all-round development of hearing impaired students in a special school.

(II) Physical Resources:

Physical resources are the tangible or concrete materials that individuals, businesses or institutions use to achieve their goals. These resources must be carefully selected, constructed and used in a special school for hearing impaired children. A school building for deaf students requires specifications for

optimal learning, including the implementation of 'deaf space' principles that emphasize visual communication and sensory access. Key features include bright colors and clearly defined areas, large classrooms with flexible furniture arrangements, better visual access to the entire space, excellent natural and artificial lighting and integration of advanced captioning technology. Additionally, robust visual and auditory alarm systems for safety, as well as accessible storage and designated spaces for teacher equipment are also important. Clear sight lines in the classroom for deaf students, optimal lighting and noise reduction through sound-absorbing materials and acoustic treatments should be prioritized. Seating arrangements should be circular, semicircular, rectangular, semi-rectangular, U-shaped or in a straight line, so that students sit close to the teacher/trainer, allowing maximum visibility of visual cues such as lip reading and facial expressions. Assistive technologies such as visual aids, written instructions, closed captions for videos, and remote microphone systems are essential. Resource rooms for deaf students require a physically accessible, low-noise environment, good lighting, and flexible seating arrangements such as a U-shape or semicircle to facilitate speech-reading; Key technologies include visual aids, effective lighting, microphones for amplification, and assistive listening devices such as FM or loop systems. Specialized resources should address both academic and emotional needs and include technology for communication support such as visual teaching aids, real-time captioning, and text or video services. Audiometric room, also known as sound booth or listening booth, is a specialized, soundproof room designed to create a controlled environment for audiological testing. These rooms are important for accurately assessing a person's hearing ability by minimizing interference from external noise. A speech therapy room is a specially equipped and organized space where a speech-language pathologist conducts therapy sessions to treat communication and swallowing disorders. These rooms usually contain a variety of equipment and resources; such as toys, games, books, a whiteboard, a mirror, and assessment kits, which help SLPs engage clients in fun and effective therapy activities tailored to their specific goals. A language therapy room, also known as a speech therapy room, is a specialized space equipped with materials and equipment designed by speech-language pathologists to diagnose, treat, and improve a patient's communication skills. These rooms often contain toys, books, communication cards, whiteboards, and other visual aids; which help patients, especially children, work on speech, language, swallowing, and other communication disorders.

(III) Financial Resources:

Financial resources refer to the money and other financial assets required by an individual or organization for its operations, investments and expansion. Financial resources are the money, assets or capital available with an individual, organization or government; which is used to meet its financial needs and to conduct activities. The process of planning, organizing, directing, controlling and monitoring financial resources to achieve the goals of an organization is called financial resource management or financial management. The financial sources of schools are grants received from local, state and federal governments, school fees, donations, grants, crowd-funding and income from alumni, as well as income from canteens and other facilities. These sources provide funds for school operations, staff salaries, and infrastructure maintenance. Financial resources for deaf schools are allocated to ensure educational access through assistive technology such as hearing aids, FM systems and captioning; as well as to provide necessary resources such as interpreters, visually accessible teaching materials and modified classroom environments. Funding will also help in the development of special

staff training, accessible infrastructure and comprehensive programs for deaf and hard of hearing students. The areas of financial allocation for deaf schools are numerous. These include funding for equipment such as FM systems and induction loop systems to help hearing-impaired students' access classroom content; Resources for services such as live remote captioning to ensure that spoken content is accessible. Funding for sign language interpreters; determining costs to train and employ teachers with expertise in educating deaf and hard-of-hearing students; Funding for personnel such as speech-language pathologists and auditory-verbal therapists; Resources for materials such as visual aids; closed captions and transcription; Adapting physical spaces with features such as comfortable lighting; reduced background noise and appropriate seating. Funding for the creation and implementation of educational programs designed for individuals with hearing impairments. Providing books, assistive reading devices and other specialized educational resources; funding for building modifications to ensure that all facilities are accessible. Support for organizations that advocate for the rights and resources of deaf and hard-of-hearing individuals. For all this, it is necessary for the special school to have adequate finances so that these arrangements can run smoothly.

(IV) Technological Resources:

Technological resources refer to devices, machines, systems, methods, and abilities that use scientific knowledge and principles to perform a particular task, thereby meeting the needs of daily life and performing tasks more effectively. Different hearing aids for children with hearing impairment include behind-the-ear, receiver-in-the-ear, in-the-ear, in-the-canal, completely-in-the-canal, etc. styles; each of which offers different features and suitability depending on the severity of hearing loss and user preference or ease of use. The selection of these devices depends on the child's specific hearing needs, lifestyle, and the type and level of hearing loss. Cochlear implantation is a surgical procedure that implants a small, electronic medical device that can help people with severe to profound hearing loss by bypassing damaged parts of the inner ear. Unlike hearing aids that make sounds louder. The cochlear implant converts sound into electrical signals and directly stimulates the auditory nerve, allowing the brain to perceive sound. The best hearing aids for groups or large facilities are actually a type of hearing aid technology, such as auditory loop systems, FM systems, and infrared systems. These systems transmit sound directly from the source, such as the presenter, to the listener's hearing aids or headphones, bypassing background noise and distance that make traditional group listening difficult. Audiometer hearing tests fall into two main categories- behavioral tests, which require a response from the patient, and objective tests, which measure responses without active participation. The major behavioral tests include pure-tone audiometry, speech audiometry, and visual reinforcement audiometry for young children. Objective tests include otoacoustic emission, which examines the function of the inner ear, auditory brainstem response which assesses the auditory nerve pathway, and tympanometry which measures the function of the middle ear. Speech and sound therapy for the hearing impaired uses devices such as speech trainers, which allow users to hear their own voice and manipulate speech signals. Other devices include assistive listening devices such as FM systems, induction loops, and infrared systems; which transmit sound directly to the user's ears or hearing aids. Cochlear implants are also used for severe hearing loss, which provide sound sensation to the auditory nerve; Captions on television or captioned phones aid in understanding spoken content. Alert devices for the hearing impaired use visual cues, vibro-tactile feedback, and advanced audio alerts to signal important events such as doorbells, smoke alarms, baby cries, and telephone rings. These devices range from standalone

units to comprehensive smart systems; which use Wi-Fi to connect various components and often integrate with smartphones to provide alerts via text messages, vibrations, or flashing lights. These devices include visual signalers, vibro-tactile devices, advanced listening devices, smart home systems, doorbell/phone signalers, security alarms, baby monitors, wake-up alarms, bed-shaker alarms with vibration components, etc.

2. Conclusion:

Given the complexity of hearing impairment, it is necessary to have availability of various types of resources in their schools for smooth teaching, training and rehabilitation of hearing impaired children. These resources include human resources, physical resources, financial resources and technical resources. Human resources refer to the workforce of an organization or business, i.e., all its employees. In the school perspective, human resources refer to the administrators, teachers, trainers, employees or all the planners and employed of a school. These are the resources that advance the goals of the school by providing labor. The administrators, teachers, and other staff of a special school help in running the school smoothly and shape the learning experience of the students. Physical resources are the tangible or concrete materials that special schools use to achieve their teaching goals. These resources should be selected, created and used very carefully in a special school for hearing impaired children. Financial resources refer to the money and other financial assets required by a person or organization for its operation, investment and expansion. Financial resources are the money, property, or capital available with an individual, organization, or government. These are used to meet the financial needs and to conduct activities of special schools. Technological resources refer to equipment, machines, systems, methods, and abilities that use scientific knowledge and principles to perform a particular task; thereby meeting the daily needs of hearing impaired children and performing tasks more effectively.

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