Communication Modalities to Develop the Communication Competency in Children with Hearing Impairment

Dr. Arjun Prasad
Special Educator
Department of Hearing Impairment
Faculty of Special Education
Dr. Shkuntala Misra National Rehabilitation University, Lucknow.

Abstract- Hearing disability is generally defined as reduced hearing ability (hard of hearing) or complete inability to hear (deafness). The level of hearing loss up to which the hearing amplifiers work is considered to be the level of ‘hard of hearing’ and the level of ‘deafness’ is considered to be the level of hearing loss up to which the hearing amplifiers stop working. The primary and profound impact of hearing disability is on the speech and language of the child. Due to lack of speech and language the child's communication ability is affected. Communication ability is an important link in the overall development of the child. Therefore, it becomes necessary to make the child capable of communicating through the various means. Many strategies are adopted especially to enable deaf children to communicate with each other. For this, there is a need to implement some alternatives to communication, some artificial systems and methods. In the presented article, an attempt has been made to show the communication modalities to develop the communication competency in children with hearing impairment.

Index Term: Hearing, Speech, Language, Communication, Deafness, Decibel, Spelling, Sign, Oralism, Manualism, Bilingualism, Community.

INTRODUCTION
Individually who have difficulty hearing and are unable to hear are considered hearing impaired. Hearing disability is generally defined as reduced hearing ability (hard of hearing) or complete inability to hear (deafness). Hard of hearing and deafness are not necessarily the same thing. People who hear between 26 decibels to 90 decibels are said to be hard of hearing and those who have hearing loss more than 90 decibels are classified as deaf. In another form, it can be said that the level of hearing loss up to which the hearing amplifiers work is considered to be the level of ‘hard of hearing’ and the level of ‘deafness’ is considered to be the level of hearing loss up to which the hearing amplifiers stop working. From there the level of deafness is considered. Any hearing loss, whether temporary, permanent or fluctuating, not only affects a child's speech, language and communication but also affects his or her classroom experience, social and emotional development, literacy skills, abilities, etc. Also affects. The primary and profound impact of hearing disability is on the speech and language of the child. Due to lack of speech and language the child's communication ability is affected. Communication ability is an important link in the overall development of the child. Therefore, it becomes necessary to make the child capable of communicating through various means. Many strategies are adopted especially to enable deaf children to communicate. For this, some options of communication and some artificial systems have to be implemented.

Communication options for the hearing impaired -
For hearing impaired children, the medium of communication means those mediums through which they present their thoughts and feelings to others and become aware of the thoughts and feelings of others. These mediums of communication also play an important role in their education, training and rehabilitation. There are many mediums of communication available. These communication mediums can be divided into three parts on the basis of their nature - monolingual communication, linguistic communication and multi-modal communication. Two communication mediums come under monolingual communication- oral communication and manual communication. There is a communication option under bilingual communication medium, which is called bilingual communication. Under multi-modal communication medium, there is only one medium, which is known as composite communication.

(1) Oral Communication - This option is theoretically known as Oralism. The first school was the Clark School for the Deaf, Northampton, Massachusetts, established in 1867; where oralism was adopted. In oral communication, emphasis is laid on developing speech pronunciation skills by using the remaining hearing capacity of hearing
impaired children through hearing amplification devices and through speech reading. It believes that language should be developed through listening and speaking. Sign language is not encouraged in this; but natural expressions can be used. The primary objective of this medium of communication is to develop necessary speech and communication skills among hearing impaired persons for integration into the hearing community.

(2) Manual Communication - This communication option is theoretically known as Manualism. Manualism was started in the second half of the 18th century by the establishment of the National School for the Deaf in Paris by Abbé de l'Eppe. In this communication, mainly manual language is used. Manual language is a developed language with its own grammatical system. Sign language is widely used in the deaf community. It is a natural visual language. It is an accessible form of communication for deaf people. It is a medium of instruction. There is no emphasis on developing oral language. The primary purpose of this medium is to enable a person to communicate when he has not learned to speak effectively.

(3) Bilingual Communication - It is theoretically known as Educational Bilingualism. This medium was started by James Cummins in 1976. In the medium of bilingual communication, children are taught sign language as the primary language and oral language as the second one. Language is taught as a language. This option represents both the deaf community and the hearing community. The primary objective of this option is to make children bilingual so that they can be competent and proficient in both sign language and spoken language and can meet their individual needs can fulfill.

(4) Total Communication - This communication medium is theoretically known as Total Communication. This medium was developed by David Denton in Maryland School for the Deaf, US in 1967. In total communication, communication is for the sake of communication. All means of communication like spelling, signs, natural gestures, speech-reading, lip reading, body language, written and oral language etc. are used. The primary objective of this option is to help hearing impaired children and the people communicating with them to provide a simple method of communication. In this, a person can use speech and signs as well as other visual and contextual means.

Some Artificial systems for communication -
Apart from the above mentioned communication options, there are also some artificial systems, but these are not real languages. Such as Cued Speech, Rochester Method, Makaton, Signalong, Paget Gorman, Signing Exact English, Simultaneous Communication Technique, Finger Spellings etc. Most of these artificial systems are visual. These systems usually use signs for each spoken word. Their primary purpose is to help hearing impaired children integrate speech and language into the hearing community and to develop communication. Some artificial systems are as follows-

(i) Cued Speech - Cued Speech is a system of sound-based communication for deaf or hard of hearing children. This communication system was propounded by Orin Cornett in 1966 at Gallaudet College, Washington DC. In this method the eight shapes of the hand are differentiated into sounds of spoken language through the combination of four positions and the natural mouth movements of speech. Cued speech is a means of expressing language; it is not a language in itself. Cued Speech does not require the use of hearing or the use of speech. It is only required that the user show the mouth movements that match the cues. Since Cued Speech provides 100% visual access to the sounds of spoken language, the deaf child is able to internalize a phonemic model of language naturally in much the same way as a hearing child does. This provides the language base and phonemic awareness that supports the development of literacy--reading and writing. Deaf children who use Cued Speech generally attain English language and a literacy level equal to or better than those of their hearing peer.

(ii) Rochester Method - Rochester Method is a method of teaching hearing impaired children through ASL-Finger Spelling and oral language. The main objective of this method is to connect hearing impaired children with the mainstream of society. This method was first developed by Rochester School for the Deaf was implemented in New York in 1886 by Professor Zenas Freeman Westervelt, the superintendent of this school. The Rochester Method combines speech with fingerspelling, so every single word is spelled out. It is not commonly used today because it is excessively cumbersome and does not actually teach children grammar or other elements of spoken language.

(iii) Makaton - This program was named after the initials of UK speech and language therapist Margaret Walker; who helped create this programme. Makaton is a simplified form of sign language, incorporating symbols and gestures, and is commonly used with children with additional needs. Makaton is usually taught at Nursery, Reception and Year 1 level. The activities are fun so it helps shy children as well as those with special educational needs. In another form we can say that Mekaton is a language program for those people; those who cannot communicate by speaking efficiently; designed to provide meaning to their communication, the program presents signs and symbols in sequence to the spoken words to support spoken language.

(iv) Signalong - Signalong is an alternative and augmentative key-word signing communication method used by those individuals with speech, language and communication needs. The name ‘Signalong’ is derived from the understanding that wherever possible the sign is accompanied by speech, hence ‘sign along with speech’. Signalong uses a total communication approach to teach language and literacy skills, through speech, signs and descriptions at the
appropriate level for the child or adults’ needs. Signalong is based on British Sign Language adapted for the needs and abilities of children and adults with verbal communication difficulties. It uses one sign per concept, one concept per sign. Signalong is a sign–supporting system used in spoken word order and uses a total communication approach to reference links between signs and words. It also uses key-words, i.e. the essential word in any sentence, and uses signs at the partner's level and moderate language to ensure the message is understood.

(v) Paget Gorman - Paget Gorman Signed System is also known as Paget Gorman Signed Speech- PGSS. This system has been designed for children with speech or communication difficulties. This system was developed by Sir Richard Paget in 1930. It is a manually coded, organized sign system for the English language. It is based on a classificatory system and uses 37 basic signs and 21 standard hand postures, which can be combined to represent a large vocabulary of English words, including word endings and verb tenses.

(vi) Signing Exact English - Signing Exact English is an accurate system of presenting the dictionary and grammar of English. This system was created in the year 1971. This system is based on the morphemes of English words. Its sign dictionary is based on American Sign Language, but it has been improved. Four components have now been added to American Sign Language for the purpose of simulating English words. These four components are the stability and movement of the sign and hand, the placement of the palm, the position of the body in the display, and the mobility of the performer.

(vi) Simultaneous Communication Technique - This technique is known as SimCom or Sign Supported Speech- SSS technique. It is used by deaf, hard of hearing children or people who support sign language. It involves verbal language and manual communication. Variations of the language, such as English and Manually Coded English, are used in combination. It is the act of communicating in sign language and spoken language at the same time and is often used as a form of communication between people who are deaf and people who are hearing. It is often used by a person who is with both hearing and deaf people and they want to communicate with everyone at the same time.

Finger Spellings -
All sign languages originated from sign communication developed between deaf children and hearing adults. In all the above mentioned artificial systems, spellings are used directly or indirectly. Spellings refer to those spellings which are expressed through the fingers of one hand or both hands. Mainly two types of spellings are used throughout the world. Among these sign languages are American Sign Language and British Sign Language. Indian Sign Language is used in India, but this language is a refined form of both these languages. Following are the examples of sign language -

(a) American Sign Language (ASL) - American Sign Language originated from a language contact situation at the American School for the Deaf in Hartford, Connecticut in the early 19th century. Since then, the use of ASL has been widely promoted by schools for the deaf and deaf community organizations. American Sign Language is a natural language that serves as the predominant sign language of deaf communities in the United States and most of Anglophone Canada. ASL is a complete and organized visual language that is expressed by employing both manual and non-manual features. In this, the English letters from A to Z are expressed through the fingers of one hand.

(b) British Sign Language (BSL) - British Sign Language is a sign language used in the United Kingdom and is the first or preferred language among the deaf community in Great Britain. It is a creation of the British Deaf community. This language uses space and involves movements of the hands, body, face and head. Like other languages, whether spoken or signed, BSL has its own grammar that controls how phrases are signed. BSL has a special syntax. In this, the English letters from A to Z are expressed through the fingers of both hands.

Courtesy: Google Image.
(c) **Indian Sign Language (ISL)** - Indian Sign Language the letters of the Hindi alphabet are expressed through various fixed shapes through the fingers of one hand. This language is currently used only in the Indian perspective. Currently this language is not recognized internationally. There is a need for complete identification at this level. In this, the letters of Hindi language from अ to श्र are expressed through finger spelling.

**CONCLUSION**

The process of exchange of ideas is called communication. Various options, artificial systems and methods etc. are used for the communication of hearing impaired children. All these play an important role in communication as well as in teaching, training and rehabilitation. There are four main aspects of communication. The options are - oral, manual, bilingual and holistic communication. All four options are very important according to the needs of hearing impaired children. Along with these options Cued Speech, Rochester Method, Makaton, Signalong, Paget Gorman, Signing Exact English, Simultaneous Communication Technique, Finger There are also artificial systems like spellings etc. To support the communication options and artificial systems, there are working methods of American Sign Language, British Sign Language and Indian Sign Language. Which child will adopt which and to what extent of communication options, artificial systems and working spellings, it depends on many factors.
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