EDUCATION OF CHILDREN WITH DEAFBLINDNESS AND ADDITIONAL DISABILITIES

Source book for Master Trainers

National Institute for the Mentally Handicapped

(Ministry of Social Justice & Empowerment, Government of India)
Manovikasnagar, Secunderabad - 500 009. Andhra Pradesh

In Collaboration With

Voice and Vision Task Force
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Education of Children with Deafblindness and Additional Disabilities

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राष्ट्रीय मानसिक विकलांग संस्थान
(सामाजिक न्याय और अधिकारिता मंत्रालय, भारत सरकार)
NATIONAL INSTITUTE FOR THE MENTALLY HANDICAPPED
(Ministry of Social Justice & Empowerment, Government of India)

FOREWORD

It is seen that there is vast gap between the need for services to the persons with multiple disabilities and the infrastructure available. Infrastructure includes, qualified rehabilitation personnel/professionals. Usually, it is also seen that when service models are available for a given disability with the qualified rehabilitation personnel and professionals, the persons with disabilities can have access to such services, which, in turn, creates awareness leading to demand and, ultimately, availability of services.

In the case of multiple disabilities, the scenario is very bleak because neither the service models, nor the trained human resources are adequately available. This is probably due to the fact that the multiple disabilities come under the low incidence category for which setting up of infrastructure separately is neither feasible nor viable from the practical and cost point of view. However, such a situation should not make us to think that we should not and cannot do anything for the children with multiple disabilities and it is very unfair and injustice if they are not covered in our rehabilitation programmes.
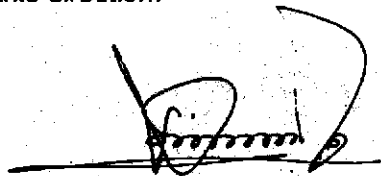
It is observed that presently, the services to the persons with multiple disabilities are availed through multiple sources where the holistic approach is missing to the detriment of the persons with multiple disabilities. Sometimes it so happens that the children with multiple disabilities are drifted to a single disability centre. They continue to receive services from the centre for longer periods without much improvement or they abandon the service to fend for themselves. The person with multiple disability undergoes the stress of load of additional disability thereby decreasing his functional efficiency drastically and rendering him helpless in his activities of daily living, interaction with the environment and society.

In order to meet their needs, it is vital to focus on the development of appropriate service models to be used by the existing qualified special teachers in the existing system. Such a strategy will be very effective as the infrastructure in the single disability area is extensively growing in the country and the special teachers working in special schools have the right attitude to acquire skills to handle the children with multiple disabilities particularly the deafblind.

NIMH in collaboration with the Voice and Vision Task Force, Helen Keller Institute for the Deaf and Deaf Blind has undertaken a project to develop the material on "Education of children with deafblindness and additional disabilities" for Master Trainers. The package thus developed will be useful in imparting systematic training to the special teachers on education of children with deafblindness and additional disabilities. The training material has covered not only the aspects on nature and impact of deafblindness but also the assessment procedure, techniques of development of communication, curriculum development and programme management in a very comprehensive manner. It is a unique and significant work in the field of disability rehabilitation. NIMH collaborated with Voice and Vision Task Force which has been supported by the Hilton/Perkins Programme of Perkins School for the Blind, Watertown, Massachusetts, U.S.A. The Hilton Perkins Program is funded by a grant from the Conrad N.Hilton Foundation of Reno, Nevada, U.S.A.

I am very happy to acknowledge the wonderful work done by the Voice and Vision Task Force. I am confident that the special schools hitherto look for guidance will be in a position to accept whole-heartedly all the cases of deafblindness with the help of this book. We all owe the responsibility towards the education of the children with deafblindness and additional disabilities and let us not feel diffident for want of the service models and training packages. Let us consider this as a stepping stone to develop more service models to enable the persons with deafblindness and additional disabilities to lead an independent living as far as practicable and feasible. I wish to urge all concerned to volunteer in giving us suggestions and comments for improving the training package as well as for taking up further research projects in this direction.

L.GOVINDA RAO, Ph.D.

We Too Shall Conquer

MESSAGE

I feel privileged to give my message. Since the last 4 years there has been growing a conscious awareness towards the needs of Deafblind population and **very exciting projects are coming up!**

It is all because of THE THRUST from major INGOS to our NGOs – Hilton Perkins International – Boston has been in the forefront with its Vision and Support to the people working for the Deafblind! One of the Major momentous outcomes of its activities is the production of the **Trainer's** Manual from Voice & Vision Task Force Committee. My Heartiest Congratulations to all those involved in working on this very important and timely document which should bring about a Transformation in the growth **of Human Resource Development** –

My Dream " The Education & Welfare of the Deafblind" is today a Reality and I am all excited to witness the release of this Manual – Helen Keller has truly said, *" Life is an exciting business, and it is more so when it is lived for others – For Alone we can do so little, but Together we can do so much* " and truly this manual will live up to her words.

Once again my Heartiest and Warmest Thanks to everybody on this Project!

Mrs. BEROZ N. VACHA
Hon. Director & Consultant

"Give to every other human being every right that you claim for yourself" - R. Ingersol

ACKNOWLEDGEMENTS

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DEAFBLINDNESS AND ADDITIONAL DISABILITIES

EDUCATION OF CHILDREN WITH DEAFBLINDNESS AND ADDITIONAL DISABILITIES

Introduction

Jayanthi Narayan

The movement of 'Education for all' was launched in 1990 and since then there is a commitment made by many nations to get more children into schools, including those with disabilities. In developing countries, economic crisis, inadequate financial resources and population growth has slowed down the momentum. However, the fact remains that there is a visible change for the better in the scenario. Programmes like District Primary Education Project (DPEP) and Sarva Siksha Abhiyan (SSA) launched by the Government of India includes education of children with disabilities.

Further persons with disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (P.D. Act) promises free appropriate education to all children with disabilities upto the age of 18 years. The National Trust Act which followed in 1999 covered children with Autism, Mental Retardation, Cerebral Palsy and Multiple Disabilities. While it is heartening to note these signs of progress, the fact remains that a large number of children with combination of disabilities remain unattended.

It is estimated that 5% of Indian population is disabled. NSSO (1991) shows 1.9% have physical and sensory impairment. There is no information on the exact number of persons having a combination of more than one disability. The reason for lack of statistics can be (a) ignorance of persons who give information/seek support, (b) the child may have got counted under the prominent disability as perceived and reported by the parents, (c) lack of concerted efforts in identifying such children, (d) the condition itself posing problem due to more than one disability. However, let us see what is the status of the children identified. Are they in schools? Are they getting the right training? Do they have trained teachers to teach them? Do they have the suitable infrastructure and other facilities for their education? Unfortunately, we do not have positive answers to these questions.

Few children attend special schools, meant for children with single disability – invariably schools for children with mental retardation as they are accepted in these schools. But teachers are not competent or qualified to manage these children.

Children with deafblindness are estimated to be about 3,50,000 in the country (Sense International India 2000). Exclusive educational facilities for such persons amount to less than 20 in the country. Teacher training courses for such children with deafblindness is conducted only in 2 centres in the country. For children having combinations of other disabilities such as mental retardation (MR) and visual impairment (VI) mental retardation

and hearing impairment (HI) or mental retardation with cerebral palsy (CP) or combinations of CP and VI or CP & HI or more than two disabilities, there are no training facilities. Such children are either not enrolled in any school or predominantly found in schools for children with mental retardation.

A survey of 150 special schools for persons with mental retardation in various parts of the country revealed that on an average, 2.30% in the schools had VI, 3.19% had HI, 0.59% had VI and HI and 6.29% had CP (unpublished, NIMH 2003). The teachers who are qualified to teach children with single disability revealed that the competency they have for education and management of such children is limited and expressed need for further training.

Establishment of exclusive educational facilities for children having multiple disabilities may not be practical and economically viable, due to the conditions being a low incidence one. Therefore, a few children may require services in a given region. Transport and such other logistics to reach them to the exclusive special schools will be difficult. On the other hand the number of special schools for single disabilities are on the increase in our country. Preparing our special teachers for education of children with additional disabilities is a feasible alternative. While centers of excellence focusing on education of children with multiple disabilities such as Helen Keller Institute for the Deaf and Deafblind, Mumbai, can be established, existing special schools can have facilities and trained human resources to educate these children. Empowering existing special teachers through intensive training is one way of achieving this goal.

As a first step, efforts are geared towards training "master trainers", who in turn are expected to train special teachers in their region. By this, over a period of time through a series of training programmes, every special school is likely to have at least one special teacher competent to educate children with deafblindness and multiple disabilities.

Such a "Master trainers training programme" requires resource packages in print and audio visual media, structured training programme with practical on hand experience backed by theoretical support and resource persons to carry out these tasks. This training programme is a collaborative effort of Voice and Vision Task Force which is supported by Hilton/Perkins Program of Perkins School for the Blind, Boston, USA in Hilton/Perkins International and NIMH.

The master trainers trained through this programme will be responsible for further training of special teachers in their region. This source book provides them with information, techniques and strategies for training children with deafblindness and additional disabilities. Simple language with illustrations is used to make the learning easy as well as interesting. Practical examples and application questions are provided suitably to help the learner understand the concepts better. Additional readings are also listed to enhance further learning.

UNDERSTANDING CHILDREN WITH DEAFBLINDNESS AND ADDITIONAL DISABILITIES

- Nandini Rawal
- Vimal Thawani

db **In this module, you will learn about:**

- Impact of deafblindness and visual impairment with additional disability on the development of the child

- Various conditions and syndromes causing deafblindness and visual impairment with additional disability on the development of the child

It was time to go to school for Pinky . Pinky knew about this routine as her mother gave her the school bag and her dad picked up his car key (key chain with bell sound) and she could anticipate and stood up to go to school with her father......

Her father smiled and thought about how things had changed so much since Pinky was born six years ago, when doctors broke the news to him that she was born without eyes(anophthalmia) and thus there was no hope of getting her sight back. She was probably too weak even to survive.

The first two years were very tough for Pinky and her parents . She was born six weeks prematurely and she used to get severe epileptic fits regularly. Parents knew she would develop some sort of disability and accordingly they were prepared . But as she started growing she started showing marked delay in her development, specially in communication .

Pinky was taken to doctors several times but no one told them that she suffered from a hearing loss ! She had severe difficulty in eating and toileting ....

After medical intervention for her epilepsy, her fits were under control and the planned intervention has made Pinky an important member of her family .

There are many children like Pinky who have visual impairment in combination with one or more other disability. Disabilities commonly associated with visual impairment include cerebral palsy, mental retardation, movement disorder and hearing impairment.

It is recommended that the master trainer —

- reads and understands the manual thoroughly

- uses the manual as a reference book while working with children

- supplements learning with use of video film and reading the additional references provided

- keeps contact with the resource persons by mail/email after completion of the course to update and clarify doubts

- makes video recordings of his/her teaching learning situations with children with deafblindness and additional impairments and analyses for further refinement of his/her skills.

- makes use of every opportunity to train special educators/parents and other trainers

- documents his/her activities systematically with regard to training teachers as well as students.

- strives towards improving quality and reaching out to more number of the target population

- finally make sure, in his region all children with deafblindness and additional disabilities get appropriate education.

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It's not easy to exactly define children with Multiple disabilities / deafblindness. We will try to understand them in a broader context.

The term "multiply disabled" is frequently used to describe a child who has more than one condition that affects learning. According to Individuals with Disabilities Education Act (1990) (IDEA) a child is considered multiply handicapped if she has two or more handicapping conditions that require educational attention which cannot be met by arrangements for single disability. According to this definition a child who has Cerebral Palsy which makes its difficult for her to write with the pencil and who has low vision which makes enlarged print necessary for reading would be considered a multiply disabled child.

Each child with multiple disabilities is unique. Each child has her own temperament and her own set of experiences and may be affected in different ways by medical condition or physical disabilities. This many-a-time makes it difficult to make exact predictions on how much any child will learn in future.

Visual conditions that often occur with other disabilities :

Cortical visual impairments: Cortical visual impairment is caused by an abnormality in the brain. The eyeball and other optical structures are normal, but for some reason, the brain has difficulty in processing and interpreting visual information.

Optic nerve atrophy and optic nerve hypoplasia : This conditions affect optic nerve, the bundle of fibers which transmit signal from retina to the brain. In optic nerve atrophy, the optic nerve is damaged somewhere – in optic nerve hypoplasia the nerve has not developed. This may mean that the child may have some vision or may be blind, depending on how much of optic nerve is intact.

Other conditions :

Various other conditions can also affect both the brain and visual system. Cytomegalovirus is a common virus that can damage a child's brain before birth, resulting in such disabilities as mental retardation, hearing impairment, and visual impairment.

Toxoplasmosis is a parasite commonly transmitted by cats which can invade the brain and eyes. The resulting brain damage can cause mental retardation, seizures, cerebral palsy, and visual impairment, alone or in combination.

Rubella, or German measles, can affect the developing foetus if the mother has the illness early in her pregnancy. Depending upon when in the pregnancy the illness occurs, the baby may be born with conditions

such as mental retardation, seizures, cerebral palsy, and visual impairment. A very common cause of visual and multiple disabilities is lack of oxygen to the brain (anoxia), either during delivery or as a result of an accident later in childhood. Again, loss of oxygen can lead to brain damage and a wide variety of disabilities, including learning disabilities, mental retardation, cerebral palsy, and visual impairment.

The vision loss caused by these conditions can range from a mild impairment to complete blindness. Most students do have some vision and should be encouraged to use it. However, children with visual disabilities and brain damage may seem to use their vision differently at different time of the day. In addition, these children often have trouble with perceptual responses such as perceiving depth, remembering visual information, reaching for objects they see, and identifying important visual information.

Common conditions associated with visual impairment :

Several disabilities frequently occur with visual impairment. They include mental retardation, cerebral palsy other physical impairments, speech and communication disorders and hearing impairment.

● **Mental Retardation :**

Children with visual impairments often show delayed development during the preschool years because of the learning challenges posed by their vision differences. For example, they may be slow to crawl or

walk because they are not aware of interesting things around them to be explored, or they may repeat the words of others more frequently than most children because the sounds of speech are more available to them than information about the meaning of language. But these developmental lags often disappear as language becomes more meaningful to them and as they begin to explore and understand their environment. When a child is slow in learning she is said to have "developmental delays".

Other children with visual impairments experience a true limitation in the rate and quality of learning. They do not ever "catch up" with other children of their age. Their skills in all areas of development – cognition, language, movement, self-help, and social skills – usually remain significantly below average all their lives. In addition, they have more difficulty learning adaptive behaviors. These are the skills that enable people to independently meet the expectations of their world, such as dressing and feeding themselves, managing money, or talking appropriately with other people. Children with these limitations in learning are said to have mental retardation. About 3 percent of all children is estimated to have mental retardation,

Mental retardation is not caused by visual impairment, although either condition can increase the delays normally caused by one condition.

● **Cerebral Palsy :**

Cerebral Palsy is a disorder that affects child's motor ability including movement, balance and posture. The condition is due to some damage to the brain or from an injury to the brain before birth, during birth and

shortly after birth. Types of injuries that can result in cerebral palsy include: infections, head trauma during or after birth, toxic injuries from maternal drug or alcohol use; too little oxygen before, during, or after birth or bleeding in the brain. Cerebral palsy is not a disease. It is not contagious.

The child with cerebral palsy may have involuntary movements or high or low tone in her head, trunk, arms and legs. Some children with cerebral palsy have cortical visual impairment. Approximately 50% of children with cerebral palsy have difficulty in controlling muscles of the eyes and this result in strabismus. In this condition the eyes are misaligned showing one or both eyes turned inward or outward.

db Deafblindness :

A person is deafblind when he or she has a severe degree of combined visual and auditory impairment.

Some deafblind people are totally deaf and blind, while others have residual hearing and vision.

The severity of the combined visual and auditory impairments results in severe learning and communication problems .

The term 'deafblind' is used to describe a heterogeneous group of people who may suffer from varying degrees of visual and hearing impairment, perhaps combined with learning and physical disabilities, which can cause severe communication, developmental and educational needs. A precise description is difficult because the degree of deafness and blindness, possibly combined with different degrees of other disabilities, are not uniform, and the educational needs of each (person) will have to be decided individually."

Thus the child with deafblindness is not a deaf child who cannot see or a blind child who cannot hear. The problem is not an additive one of deafness or blindness. Nor is it solely one of communication or perception. It encompasses all these things and more. The deafblind persons are multi sensory deprived: they are unable to utilize their distance senses of vision and hearing to receive non-distorted information. Their problem is complex.

db What are these children like ? (Characteristics)

These children may have difficulties in some of the following areas:

- Have a distorted perception of the world
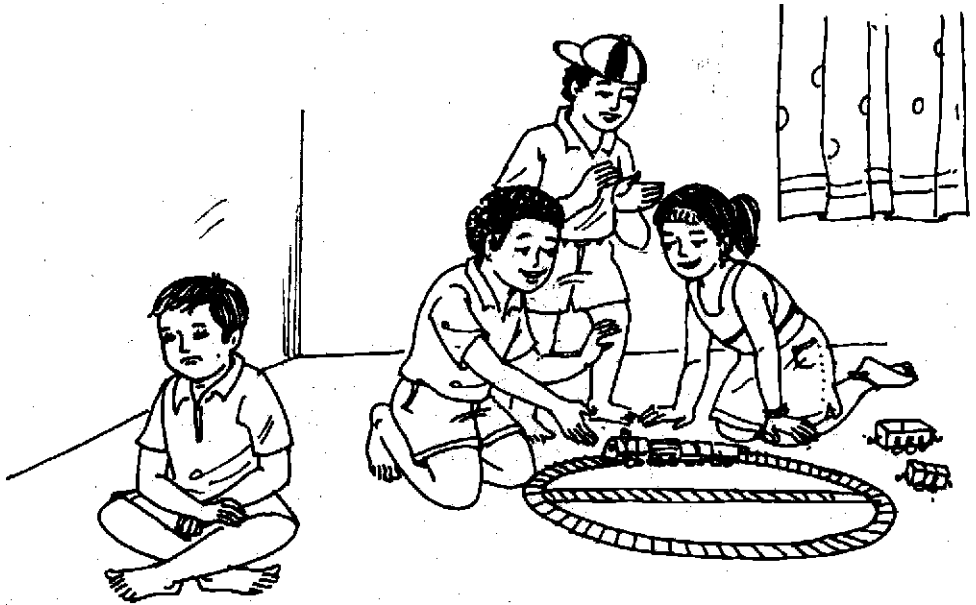
- Appear to be withdrawn and isolated
- Lack the ability to communicate with his or her environment in a meaningful way
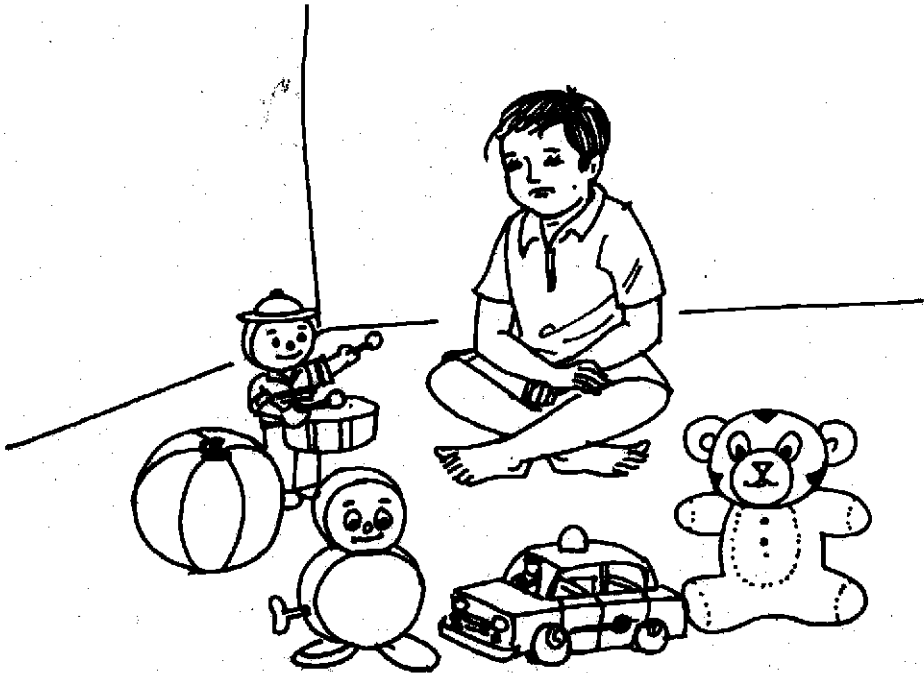
- Lack curiosity and be deprived of many of the basic motivations
- Have medical problems that lead to serious developmental delays
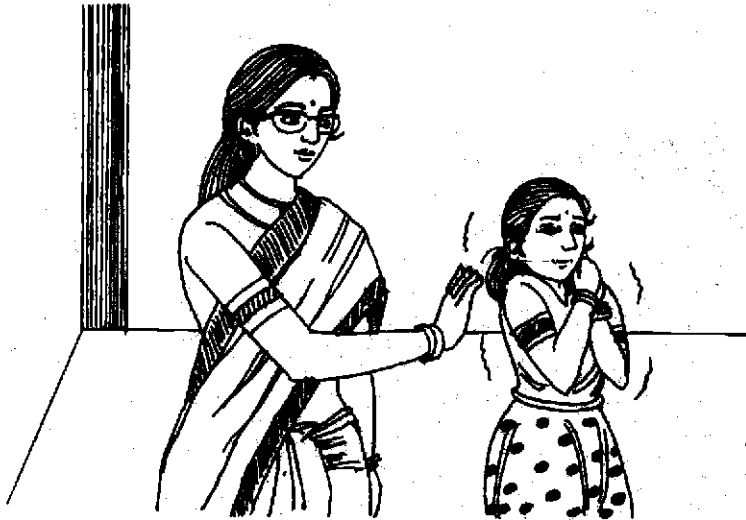
- Are defensive to being touched
- Have extreme difficulty in establishing and maintaining interpersonal relationship with others
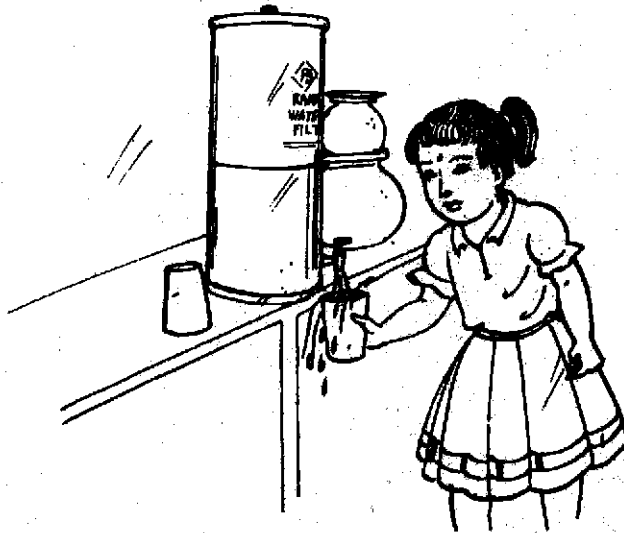
- Lack the ability to anticipate future events or the results of their actions
- Have feeding difficulties and/or unusual sleep patterns
- Exhibit frustration, discipline problems, and delays in social, emotional, and cognitive development because of the inability to communicate
- Have to develop unique learning styles

Activity :

1. Simulation exercise under blind fold with ear plugs
2. Simulation exercise with the use of various kind of simulation glasses e.g. Cataract , Retinitis Pigmentosa, Myopia etc.
3. Simulation of visual impairment with cerebral palsy
4. Sharing the experiences of simulation

db Where are these children?

How many children are there with multple disabilities or deafblindness?

- Presently no authentic data is available. In India it is estimated to be 3.5 lakhs.

- Ashtvakra Yojana (Govt. of Gujarat) implemented a state wide CBR for cross disabilities including persons with multiple disabilities under which a Door to Door survey has been conducted in 29 districts.

- Sense International India is supporting 24 services for the deafblind in different parts of India

- There is a tremendous unavailability of data

db What has caused multiple disability or deafblindness in children?

The causes of deafblindness can be split into two groups – congenital and acquired. These causes affect the development and needs of deafblind persons differently.

There are significant differences between the learning opportunities for children who are born with dual sensory impairments and those who develop it later in life.

For those born with deafblindness there are many additional problems in organizing and understanding what they perceive of the world.

The best known reason for congenital deafblindness was rubella in most of the developed countries. As far as India is concerned there is no authentic data available in this regard. But in most of the programs today in India for children with multiple disabilities and deafblindness, there are children with Rubella.

db Causes

Pre-natal	Peri-Natal	Post- Natal
Mother : Physical Trauma	Prematurity of birth	Head injuries
Poor Nutirition	Low birth weight	Postnatal infections
Infection	Traumatic Birth Injury	Frequent high fevers
Radioactivity	Respiratory distress	Lead poisoning
Toxic agents	Hypoxia	Socio-cultural and economic factors
Secxually Transmitted Disease	Neonatal acidosis	Mumps, Measles
Blood Incompatibility	Asphyxia	Malnutrition
Hydrocephaly	Traumatic Delivery	
Microcephaly	Exces Oxygen	Neonatal Jaundice
Syndromes eg. Down's Usher's, Alport's CHARGE Rubella Other Chromosomal abnormalities Neurological Disorders e.g. Cerebral Palsy		Epilepsy

There are many other congenital conditions/syndrome which result deafblindness and multiple disabilities. The details of such conditions is as follows:

db CHARGE syndrome

In 1981, Dr. Roberta Pago documented a series of characteristics now known as CHARGE. The collection of six multisystem congenital anomalies includes

C : Coloboma of Iris and/or Retina

H : Heart defect (various kinds)

A : Choanal Atresia (unilateral or bilateral)

R : Growth Retardation

G : Genitalia anomalies

E : Ear anomalies (external, middle and/or internal)

Although some cases appear to be influenced by heredity, environmental factors have not been ruled out. Infants typically are fragile and often require repeated surgery to repair cleft palate, esophageal, and gastric complications. Hearing loss varies and is accompanied by outer-ear deformities. Coloboma of the eye occurs in 86 percent of cases. Other visual problems include micro ophthalmus (abnormally small eyes) and nystagmus (involuntary rapid movement of the eyeball). Facial palsy has also been reported in a significant number of cases.

db Rubella

Rubella is one of the mildest illnesses caused by a virus, and is one of the few which regularly cause birth defects when contracted by pregnant women. Clinical rubella begins approximately two weeks after exposure. The exposed person may begin to shed the virus as much as one week before any signs of the illness is present. To add to the difficulty of identifying the presence of rubella, subclinical rubella may occur (that is, rubella without any rash or other overt sign or symptom). Such rubella can be detected only by laboratory tests.

When a woman develops rubella during pregnancy, the fetus remains infected throughout the pregnancy and often for an extended period after birth. If the infection occurs during the first trimester of pregnancy, the risk of rubella-associated defects is greatly increased. The eyes, ears, heart, central nervous system, and brain appear to be especially susceptible to rubella associated damage. The rubella baby may have low birth weight, Cataracts, Glaucoma, heart defects, hearing defects, brain damage, or any combination of these problems. He will often continue to grow more slowly than his siblings. Many of these defects

can be treated with surgery. Such treatment, however, will entail extended stays in hospital, and disruption of normal development in some areas often results.

A child with Rubella is often mislabeled as profoundly retarded. He may show unusual sleep patterns, feeding difficulties and problem in chewing and swallowing food. Some children exhibit reaction to clothing because sensory damage might have caused a very low threshold of tolerance to tactile sensation. Irregularities of biological functioning often create difficulty/ delay in toileting. Inability to communicate can lead to frustration as well as lags in social, emotional and cognitive development.

db Usher Syndrome

Usher syndrome causes congenital sensorineural hearing loss and Retinitis Pigmentosa (RP). The vestibular system responsible for equilibrium may also be involved; physical findings are otherwise normal. The hearing loss is often severe to profound and is usually present at birth. In some types of Usher syndrome, however, the loss may occur during infancy and be relatively mild. Vision loss results from retinitis pigmentosa and varies in its period of onset and pattern of progression. To date, several types of Usher syndrome have been identified and classified.

Usher type I :

- Born deaf and they cannot hear normal speech even with a hearing aid.

- These children have poor balance and may be late in sitting up and walking.

- RP seems to occur between 8-12 years

Usher type II :

- Partial to severe loss of hearing from birth.

- Loss is partial and so it is often not recognized until the child is four or five or older.

- These children have normal balance.

- They usually attend classes for partially hearing children or mainstream classes and depend heavily on hearing aids to learn speech.

- Their RP seems to occur in adolescence.

Usher type III :

A rarer form known as Usher type III causes RP and progressive hearing loss in young adulthood.

- Hearing and sight seem normal
- RP is diagnosed, usually in the twenties,
- Mild hearing loss may occur at the same age .
- Throughout adulthood these people become progressively impaired in hearing and sight.

db **Other syndromes include :**

Alport's Syndrome

Apert's syndrome (Acrocephalosyndactyly)

Bardet-Biedy syndrome

Cockayne's Syndrome

Crouzon's Syndrome (Craniofacial Dystosis)

Down Syndrome

Duane's Syndrome

Friedreich's Ataxia

Goldenhar's Syndrome

Hunter's Syndrome, Hurler's syndrome

Marfan's syndrome

Mobius syndrome

Neurofibromatosis (von Recklinghausen's Disease)

Norrie's Disease

Optico-Cochleo-Dentate Degenration

Refsum's Syndrome

Trisomy 13-15 syndrome (Patau's Syndrome)

Trisomy 18 syndrome (Edward's syndrome)

Turner's syndrome

Wildervanck syndrome

db **Other Causes :**

Prematurity and low birth weight

Premature (sometimes called preterm) infants as a group are at risk for a broad spectrum of complications during the neonatal period and constitute the largest group of infants facing disability or death.

Advances in medical technology have significantly improved the longevity of preterm children. As a result a greater number of premature infants and young children are surviving with multiple congenital anomalies.

Infections during the Newborn and Infancy Period

Infectious agents invading the brain or spinal cord can cause widespread damage in a newborn or infant whose immunological system is unable to defend against such an infection. Either the infection itself or inflammation caused by the infection can cause mental retardation, visual impairment, hearing impairment, neuromotor problems, or any combination of these. A few examples are Meningitis and Encephalitis.

Impact of deaf blindness on the development

DEVELOPMENTAL MILESTONES OF CHILDREN

Developmental Area	Birth – 12 months	13-24 months	25-36 months
Cognitive	• Imitates sounds, gestures, or actions • Shows displeasure at loss of toy or object • Demonstrates object permanence • Begins to demonstrate cause and effect or means-end behaviors	• Imitates use of toy • Points to body parts • Demonstrates memory (e.g, sings a song) • Uses objects as tools • Uses trial and error	• Matches objects • Remembers past events • Begins to sort objects by size, color, texture, and shape • Tells use of object
Communication	• Smiles • Makes eye or face contact • Babbles • Laughs • Says first word • Understands "no" • Respond to own name	• Uses gestures (points, waves) • Uses 2 word sentences • Follows simple directions • Names familiar objects and people	• Uses first person pronouns(I, me) • Asks questions • Understands some prepositions (on, next to, on top of) • Begins to use imagination
Gross Motor (large muscles)	• Controls head (holds upright when being held or when lying on tummy) • Rolls over • Sits • Crawls	• Pulls to stand • Walks • Climbs into adult-size chairs • Rolls, then throws balls	• Walks up and down stairs • Begins to run • Begins to jump • Balances on one foot
Fine Motor (small muscles)	• Brings hand together • Grasps objects • Reaches for toys (either visually or auditorially) • Searches for a dropped toy • Explores objects (pats, pokes, hits together)	• Releases objects on purpose • Uses pincer grasp (thumb and index finger) • Scribbles • Puts objects inside containers • Completes simple form board puzzles • Turns pages of books	• Stacks objects • Copies geometric figures (either tactually or visually • Strings beads • Sorts objects by size and textur

Developmental Area	Birth – 12 months	13-24 months	25-36 months
		• Uses wrist rotation (turns doorknobs, jar lids, etc.)	
Self-Help	• Eats with spoon • Holds and drinks from bottle • Eats some finger foods	• Drinks from cup • Removes some clothing independently • Indicates toilet needs • Anticipates some daily routines	• Puts on some clothing independently • Puts toys away • Partially or fully toilet trained
Sensory	• Focuses on and follows objects • Turns to sound • Explores objects by touch	• Identifies hot and cold • Identifies familiar sounds • Identifies familiar odors • Recognizes objects by touch • Explores objects or surfaces with feet	• Recognizes places or activities by odors or sounds • "Tracks" Braille (follows along in book or on label) • Identifies texture
Social	• Makes eye or face contact • Smiles • Recognizes parents and family members • Reaches for familiar person • Cries when parent leaves	• Plays interactive games with adults • Hugs • Repeats actions that others laugh at • Imitates household activities (feeding baby, sweeping, etc.) • Fantasy play • Plays independently	• Plays interactively with peers • Shows signs of ownership • Asks for help • Pretends

db Multi sensory Deprivation

The deafblind person suffers multi-sensory deprivation. He does not learn from interaction with his environment with the same faculty as the non-disabled person. His environment is bound by his random reach. Motivation to explore is minimal.

The crucial role of external stimuli in motivating motor development and in laying the groundwork for cognitive development is limited due to the limited channels of access (Touch, Taste, Smell) and by the distortion which exists even in those channels. The resulting developmental lag renders most traditional tests of vision, hearing and intelligence inappropriate.

Through mediation between the person and his environment, he can be helped to experience, accept, organize and react to external stimuli. He can be taught to use his residual vision and hearing (where the potential exists) and to develop essential motor skills, concepts, an effective means of communication and the living and mobility skills necessary to enter into society as a functioning member."

It is the process by which children grow physically and mentally and learn increasingly complex skills. It includes variety of skills such as making sense of the environment, communicating with others, making purposeful movements, carrying on oneself, reading and doing mathematics.

It enables a child to change from a tiny, helpless newborn to an adult who can look after his/her own needs.

Activity :

Simulation activity under blind fold e.g. ADL activities, paper-pencil activities.

IMPACT OF DEAFBLINDNESS WITH ADDITIONAL DISABILITIES ON LEARNING

- Sumitra Mishra

Impact of disabilities : Challenges to learning

Having read about the purpose of curriculum development and about our learners, it is now necessary that we acquaint ourselves with our children's learning strengths and styles.

Children who are deafblind(db) with additional disabilities, like all children are individuals who have strengths and needs that are very specific. The senses of Vision and Hearing are often referred to as distant senses, i.e. these are the senses that connect the person to the world beyond his own body and personal space. It is through these senses that children who have sight and hearing learn the most about the world and develop social relationships. Being deafblind with additional disabilities, limits the child's contact with people and things
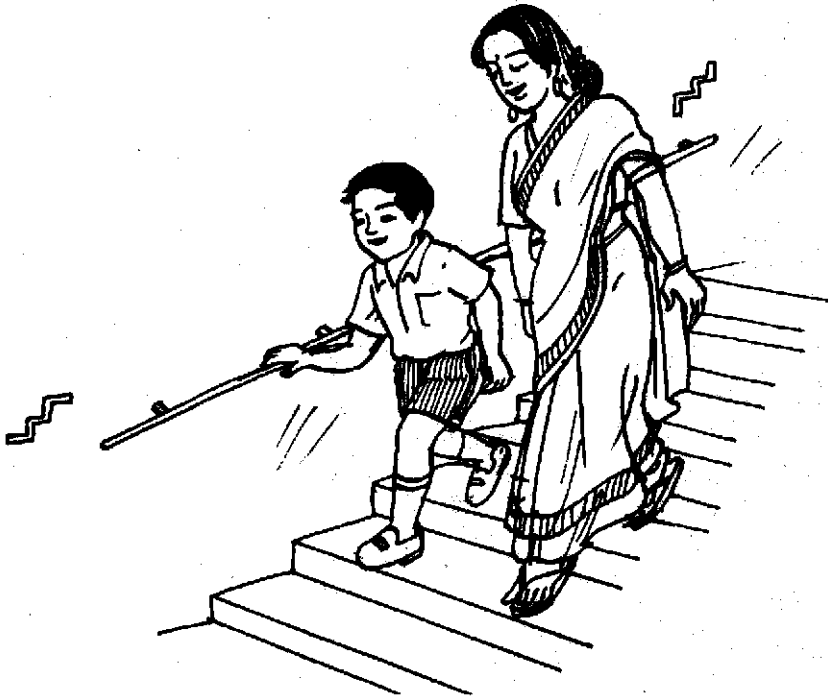
in the environment. The children therefore depend on others to assist them in accessing, interpreting, and organising information from the world around them. Without being in close physical contact with the world around them, they are **left completely isolated.**

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Children with intact vision and hearing learn effectively from all they do and from all that happens around them. These learning experiences include a series of day to day events happening around the child, because the senses of vision and hearing help the child to organise the information from the world around him. It is important to consider that the child who is deafblind does not have access to opportunities that help in such **incidental learning**, as sighted hearing children have. Deafblind children acquire **fragmented and distorted information** from their contact with people and environment.

For such a child a day is filled with a series of **'magic'** events. A child is given a bottle of milk straight away in his mouth, he gets picked up in various peoples' arms throughout the day, his shorts gets pulled out of
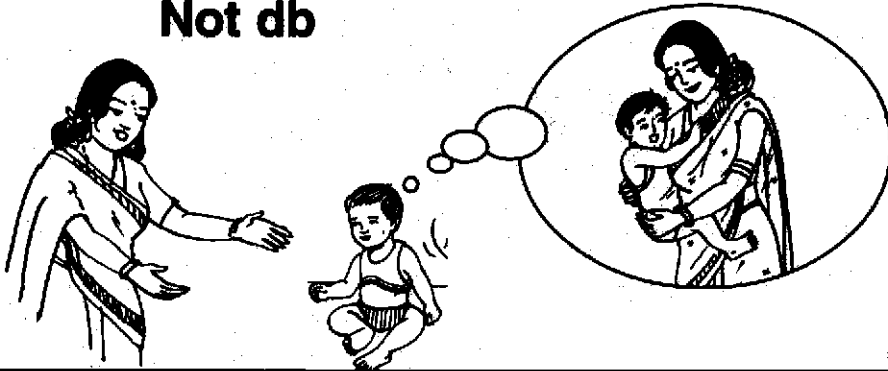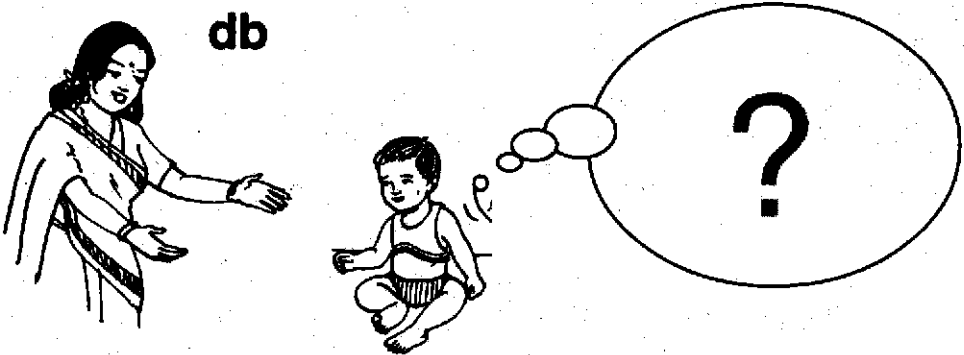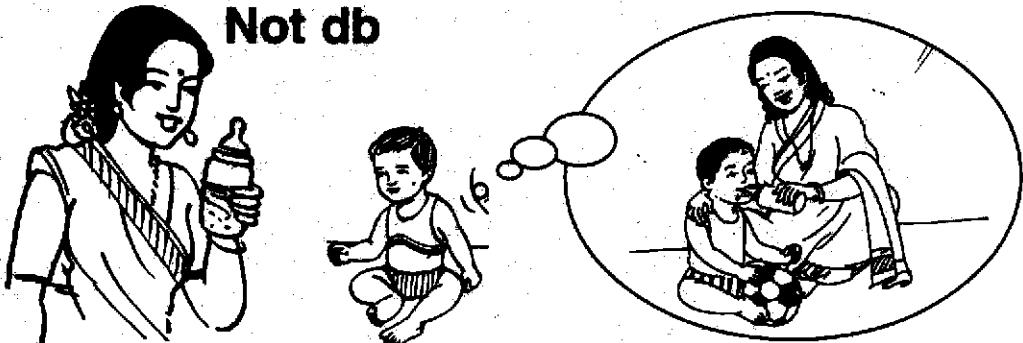
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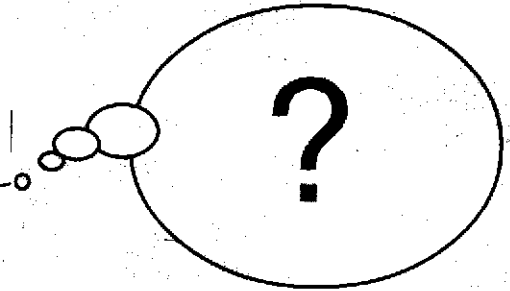
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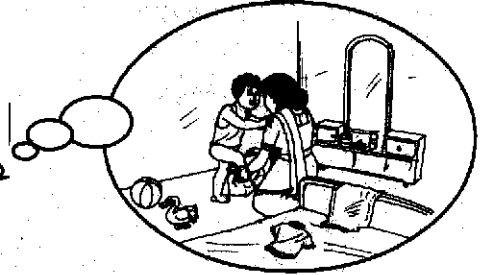
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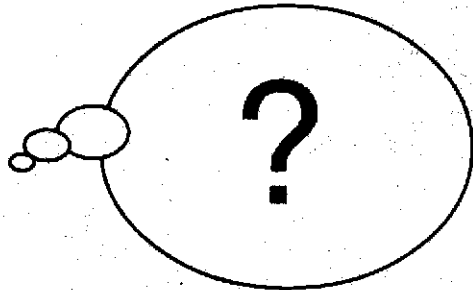
his body at strange times – all without the child having an idea as to who is doing what on him and what takes place just before and after these actions. He does not get an opportunity or time to understand, that his mother is approaching him from the front to pick him up, or that the bottle of milk is kept on the side table before it reaches his mouth or that the shorts go into the basket at the corner of the same room along with the other clothes. Although the sighted/ hearing child may not be actively doing these activities, as a baby, from very early months, he learns to watch people, objects and other persons around him in a series of actions through out the day. By the time he is ready to do the same, he has already developed the sequence in his mind; he identifies the associated actions and objects to reach his goal.

A deafblind child will learn to use all the same information about the world around him but with the use of his tactile, olfactory, kinaesthetic and proprioceptive senses along with whatever residual hearing and vision he might have. And to have this kind of learning, it is important for the deafblind child to participate actively in the full sequence of the activity. In other words he will need to experience activities in real life settings as they are occurring naturally in the environment around him. He will learn best by doing things together with you.

Bringing the sights and sounds of the world close to the child is a constant challenge to the adults around him. This will help the him gain access to numerous opportunities to anticipate what is going to happen to him in the next minute or what a particular object stands to

represent for him. Coactive movements between the child and the adult will help establish a safe and secure environment for the child. It will help the child develop a social relationship with people around him. And this in turn shall enable the child to feel more confident about his interaction with people around him.

Loss of sight and hearing also makes the child feel very fearful about the physical environment around him. He is not able to judge his own body in the space around him. His awareness about the organisation of the space and his safety concerns are also limited. It is therefore difficult for the child to get interested to move around in his environment independently. And this has an adverse effect on his learning opportunities.

Learning through doing, forms the basis of a strong learning environment for the deafblind child. It is evident that he faces a major obstacle in learning because of the **lack of opportunity to access visual and auditory cues** from the environment, **less able to anticipate events** in his immediate environment and **limited scope to make choices**. To reduce this loss, it is important to develop routines in the life of the child.

It is usually seen that such children whose world is often a chaotic one, benefit in many ways from the **establishment of strong** routines throughout the day. Such routines are designed to encourage communication. It can be developed around any activity and can be
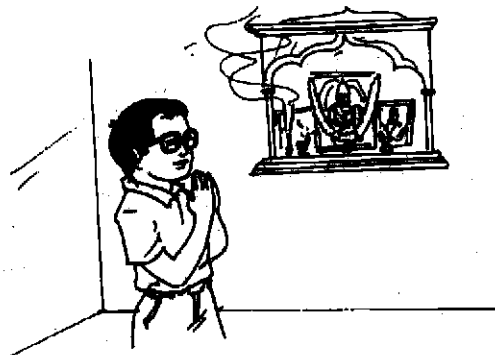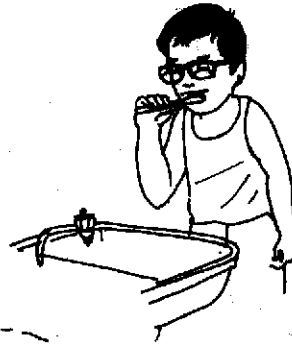
carried out frequently and regularly by an adult and child in close physical contact. Such routines can be eating time, bathing time, prayer time or bed time. Routines are carried out in the same place at the same time in the day to day schedule.

Through these ordinary everyday experiences a routine is developed which helps the child to increase his communication with the world around him, gain control over other's actions and learn concepts that are meaningful and relevant in his day to day life. **The ultimate goal of any curriculum for children with deafblindness needs to lead them towards increased opportunities for communication.**

The development of **a warm, secure and trusting relationship** between child and adult is the corner stone of educational approach. It is only through this bonding that the child with deafblindness will allow the adult to become a part of his world and interact with the adult in a positive and meaningful way. As mother and child exchange eye contact, smiles and coos, they are actually establishing a warm and trusting relationship between themselves for the rest of their lives. The desire and the ability to develop this personal relationship is the essential foundation for learning. For a child with deafblindness creating these important early interactions through touch and movement are essential for the formation of initial relationships that will go a long way in helping the child to get more and more independent in his life.

Learning is meaningful

As discussed already, deafblind children are limited by their lack of distance senses to learn effectively from the world around them. They have to depend on the amount and manner in which adults around them interpret the information to them. A teacher must make the **most of every opportunity for learning.** All interactions with adults and all aspects of the environment will be harnessed to help the child overcome the restrictions imposed by sensory impairments.

It is therefore imperative to make every use of the learning environment to help the child to become **full and active participants at home, at school and in the community.** Limited opportunity and ability also

mean that what ever the child learns needs to be directly relevant to his own life and his day to day functions. For example Raman, who is learning to count up to 10, needs to learn to count 10 biscuits for distributing to his friends, or 10 clothes to bring inside the house after they have dried or Rupees 10 to buy a packet of chips for himself to eat. Learning to use the concept of counting up to 10 in his own life will make him much more independent rather than learning to count up to 10 using beads, stones or sticks on a classroom table.

All learning opportunities for deafblind children need to be **meaningful and relevant** for the child's immediate and/or future lives. Similarly a young child is taught about the parts of his body and to match it with the parts of his mother's body while he is having a massage, taking his bath, wearing his clothes, helping mummy wear bangles, put a bindi
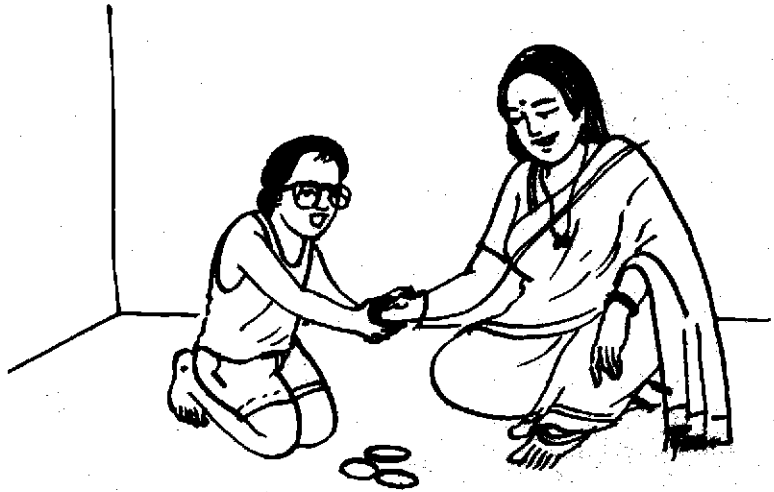
on her forehead and pin her duppatta. This makes learning meaningful, fun and consistent for the child. Care must be taken to ensure that a deafblind child does not miss the opportunity to apply whatever he learns to his immediate life, as we all know that for the children, very often their entire understanding of the world around them does not extend beyond their own bodies.

Often as we sit down as teachers to teach these children, we conjure up the image of very specialised kind of services, specially designed classrooms, and very very special teaching materials and toys. And more often we land up in a situation in which our children enjoy playing with the shining necklace around our neck, the piece of string attached to the toy bag or the jangling bunch of keys on the mother's waist! Deafblind children get more real information from things that they would commonly find lying around the house. Things that they would need to use at some point of time in their lives. They need **real objects accessible to them** in their day to day lives.

Also sometimes we find growing boys and girls still being 'taught' to play with a toy car or a sound making ball or even a wooden peg board,
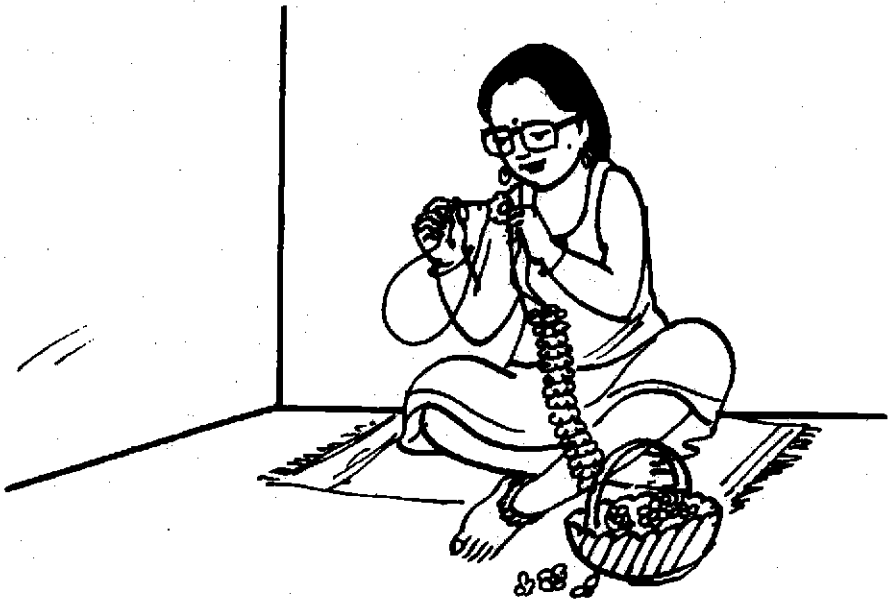
or plastic animals. Sighted/hearing children of their age would be spending their time either trying to dress up in front of the mirror, climbing their neighbour's trees for stealing mangoes or going for a swim in the village pond. The differences are huge and obvious. Children and young adults who are deafblind also need materials that are **interesting and age-appropriate** around them that they can easily access. This is also one way of providing an as inclusive experience as possible and thus respecting his growing up.

Activity : Work as groups. Select fine motor, cognitive, gross motor and prevocational areas. Think of 1 or 2 activities for each of these areas and list the materials and the setting in which you would use them. Also ensure that your choice naturally reflects the age group of the children

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THINGS TO REMEMBER

- For child with db the world is a very narrow place.
- Deafblindness leads to isolation in children
- Children with db need to develop a safe and secure relationship with the world around them
- All learning experiences must encourage the communication abilities of children with db
- They need a reactive environment to maximize their responses and learning
- Learning needs to focus on meaningful and relevant activities for the child.
- Age-appropriate activities make learning easy and fun for children

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Questions to think about -

1. How do we establish routines? Mention 2 – 3 routines in a child's daily life that can increase his communication and learning

2. How does a child with deafblindness and additional disability feel and behave due to his isolated world?

ASSESSMENT

ASSESSMENT

- Dipti Karnad

In this module, you will learn about

- what is assessment
- purpose of assessment
- what are the different types of assessments
- importance of functional assessment for children with deafblindness and additional disabilities and deafblindness.
- basic steps in a functional assessment.
- common challenges in assessment of children with deafblindness and additional disabilities and deafblindness

What is assessment

Assessment and evaluation are critical components of special education process. Assessment is collecting and bringing together of information about a child's needs, which may include social, psychological, and educational aspects. It is process using observation, testing, and test analysis to determine an individual's strengths and weaknesses in order to plan his or her educational services. In short, assessment is a systematic method of gathering information in order to describe functioning, determine needs and set priorities and goals.

Assessment involves gathering of information in many ways-testing the child directly, observing the child in various environments as well as interviewing family members and significant others.
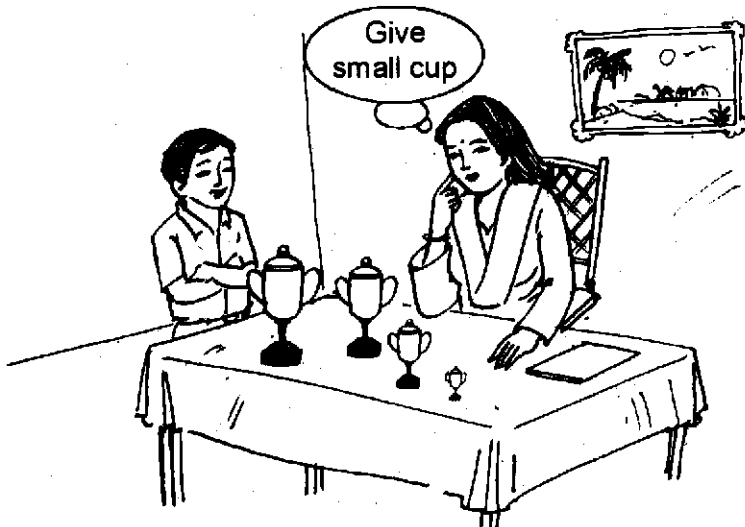
Purpose of assessment

Assessment is done to develop intervention programme.

- Assessments are carried out to answer specific questions that help ensure that the child receives appropriate services. The purpose of assessment is

- To develop an Individual Educational Plan

Depending on the purpose of the assessment, the tools and the method of assessment will be used. It is important to plan an assessment keeping in mind how the information obtained will be used.

It may include the following :

- To know what to teach and the best method to teach.

- To identify appropriate programmes.

- To select appropriate strategies and procedures.

- To classify and place the child in the suitable programme.

- To provide with the most appropriate amplification, vision and mobility aids and /or other prosthesis.

- To be aware of strengths and weaknesses.

- To develop an Individual Educational Plan.

Different types of Assessment

Assessment offers an objective way of examining a child's performance. Some assessments will describe in great detail what activity is to be carried out and how it is to be scored. Other assessments do little more than suggest areas of observation. Another area in which assessment varies is how performance is evaluated, that is, what the child's performance is compared to. The different types of assessment are :

1. Norm referenced assessment
2. Criterion referenced assessment
3. Curriculum based assessment
4. Performance based assessment
5. Formal assessment
6. Functional assessment

1. **Norm Referenced Assessment** refers to the assessment procedure in which the child's performance is compared with the performance of others. This means that standardized measures are used and the child's performance is compared to the performance of those in the norm group.

2. **Criterion Referenced Assessment** is concerned with whether a child is able to perform a skill as per the criteria set for him. He is not compared with others.

3. **Curriculum Based Assessment** is the method of obtaining direct and frequent measures of a student's performance on a series of sequentially arranged objectives derived form the curriculum used in a classroom.

4. **Performance Based Assessment** gives information about the student's ability to pick up critically, use his/her knowledge and creative problem solving to get over real life problems.

5. **Formal Assessment** involves the use of standardized tests, which demand a high degree of uniformity in administration and interpretation. Clinical Assessments of Hearing and Vision are Formal Assessment techniques.

6. **Functional assessment** is an informal way of collecting information about a child with regard to how he functions and can be done through observation, interviews or questionnaires.

Importance of functional assessments for children with deafblindness .

- Formal tests and medical examinations can only tell of potential capacity, with the result, the information got will not be useful for educational planning.

- Standardized tests–norms may not be appropriate for this population–since many items tend to rely on vision and hearing. With the result, the information got will not be useful for planning.

- Functional assessment is done in an informal setting. The findings are not norm based but show at what level the child functions.

- Functional assessment aims to understand how the child currently uses his abilities and things in the environment that support their use. This information can be directly appled to create plans and determine intervention strategies for the child.

Basic Steps in a Functional Assessment

A functional assessment involves two basic steps. The first is to gather information about the child by talking to people who know the child well, by examining medical reports and by actually observing the child engaged in typical activities. Based on the questions that emerge, the second step is to set up an environment and engage the child in activities that allow you to test specific skills and the usefulness of specific environmental modifications.

Tips for assessment :

* Asking parent /caregiver about concerns and observation about child's hearing and vision.

* Observing the child's typical responses to auditory and visual stimuli in familiar (home) environment.

* Selecting stimuli that are likely to elicit responses from child.

- Considering comfortable positions for the child, which will allow an unobstructed view of its responses.
- Seeking help from parent/caregiver to observe responses as well so as to confirm what has been seen.

Common challenges in assessment of children with deafblindness.

- Wide variety of needs.
- Inconsistency of behaviour
- Variable sensory function.
- Ill health and many other conditions affecting children with deafblindness and additional disabilities.

- Basic perceptual differences between child and assessor.
- Reduction, distortion or absence of distance sensory information affects children's ability to anticipate, act to changes in events, perceive consistency and structure experiences in space and time.
- Activities which do not form part of a child's typical routine, or which introduce people unfamiliar to the child, may induce confusion and stress whic cannot be easily overcome.
- Attention span may be limited.
- Child may respond in different ways making interpretation difficult.
- Medication may have an effect on the responses.

FUNCTIONAL VISION ASSESSMENT: VISION TO LEARN, PLAN AND

- Namita Jacob

In this module, you will learn

- about the different kinds of vision loss
- how to plan for a functional vision assessment
- the steps in carrying out a functional vision assessment
- how to apply the knowledge gathered through a functional vision assessment for programme planning.

How do we see?

Light reflected from objects in the environment reach the eye as parallel rays of light. The rays pass through the cornea, the aqueous humor, the pupil, the lens and the vitreous humor and fall on the retina. All these structures are transparent allowing light to pass through without scattering. The cornea and the lens ensure that the light is bent **(refraction)** towards the fovea, the part of the retina that produces the sharpest vision. The cornea is responsible for most of the bending of

Lens, Pupil, Aqueous humor, Cornea, Iris, Ciliary Muscles, Vitreous humor, Retina, Fovea macula, Optic Nerve
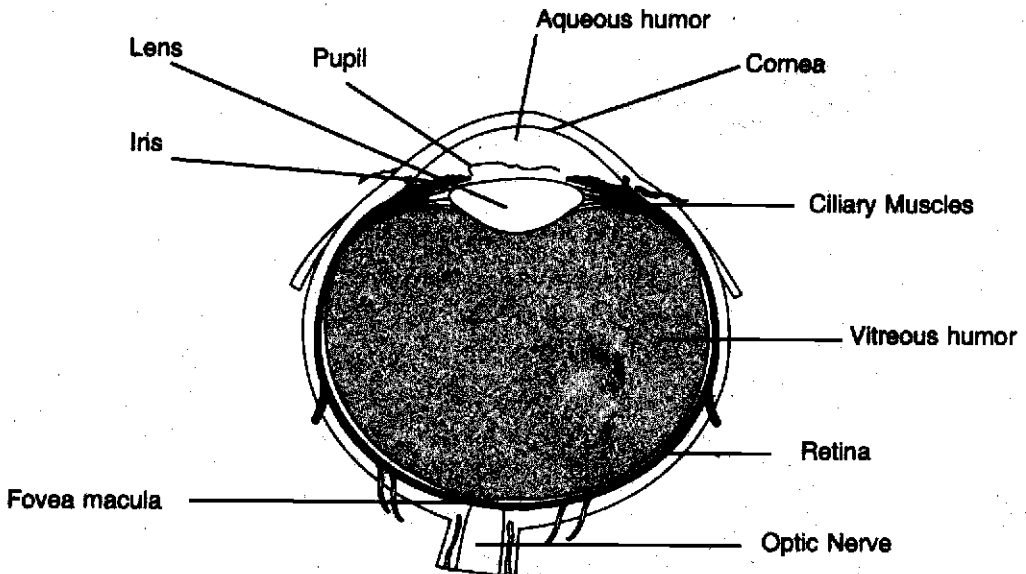
the parallel rays of light. The ciliary muscles change the curve of the lens depending on the distance of the object from the eye, causing the image to fall more precisely on the retina (**accommodation**). The retina is composed of millions of light sensitive nerve cells called rods and cones. The cones are mostly found in the macular region of the retina, although they are scattered throughout the retina. They are responsible for transmitting colour and detail. The rods are found mostly in the periphery of the retina. They are responsive in low lighting conditions and are sensitive to contrast and movement.

The rods and cones respond to light by undergoing a chemical reaction and producing electrical energy. More than one million optic nerve fibers connected to the retinal cells gather this energy and channel it

Path of light reflex

Ciliary ganglior

Path of convergence reflex

III croma nerve

Optic treet

Central grey

Lateral geniculab boders
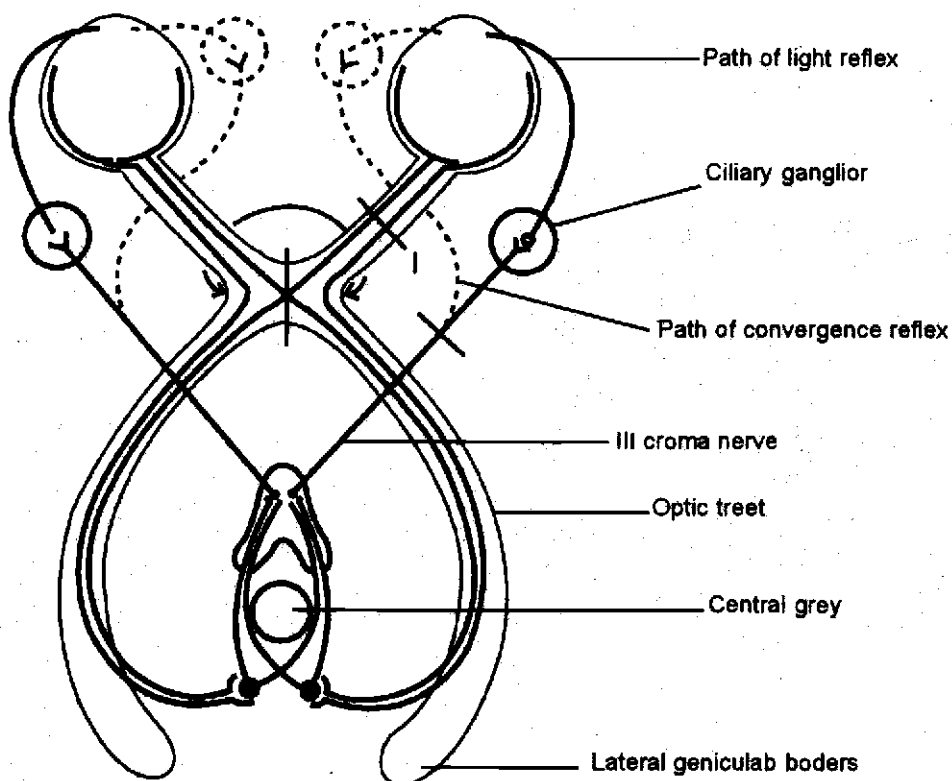
through the optic nerve to which they are joined at the back of the eye. One optic nerve emerges from each eye and they meet at a point called the optic chiasm just before they enter the cerebral hemisphere. Some fibers cross over at the optic chiasm so that information from each eye is sent to both hemispheres of the brain. The optic nerves carry the electrical impulses through the cerebral hemisphere to the occipital lobe where the image is perceived or interpreted.

How do the different visual conditions affect what we see?

Many people assume that a person who is "blind" or "visually impaired" lives in a world of total darkness. In reality, only a small percentage of people who are visually impaired have no sight at all. Most can distinguish light and dark and many can see forms and colour. Many children with visual impairment can use or potentially use their remaining vision to support or guide everyday activities and learning.

Depending on the part of the eye that has been impacted, the world can look very different to a child with visual impairments. There are primarily three kinds of problems you can have in the quality of what you see: **clarity** (the image is unclear or blurred), **completeness** (parts of the image are not visible) and **comprehension** (although a clear image is sent to the brain, the capacity to attach meaning to it is impaired). In order to plan intervention that is responsive to the specific needs of the child, it is important to understand what the child is able to see and how the child uses vision.
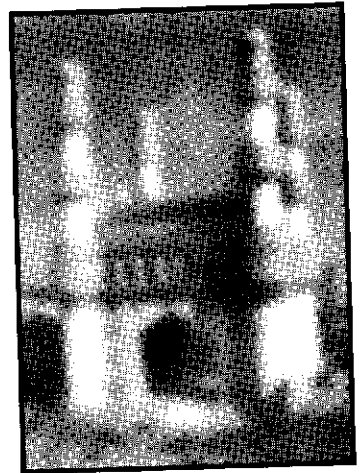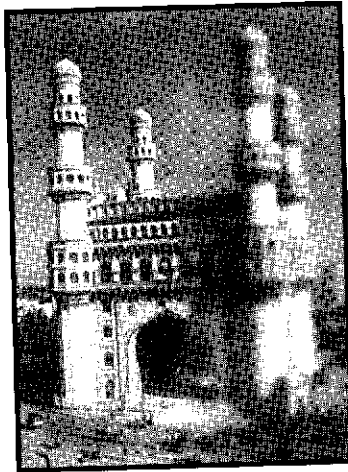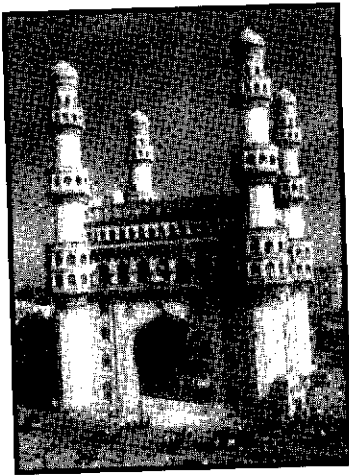
Clarity : For an image to be clear, the light must pass unhampered through the eye, and bent (refracted) so that it falls precisely on the retina. Any condition that interferes with the transparency of the cornea, the lens, the aqueous and vitreous interferes with the refraction of light, resulting in an unclear or fuzzy image. The shape of the eye and the capacity of the lens to accommodate can cause the image to be focused behind or in front of the retina again resulting in the loss of clarity. Cataracts, microcornea, dislocated lens and high refractive errors are some examples of eye conditions that reduce the clarity of the image.

Of course, the retina that records the image and the optic nerve that carries it to the brain must both be unimpaired to maintain and transfer

a clear image. Conditions that affect the optic nerve and the retina, reduce sensitivity to contrast and the ability to perceive colour and detail in the entire visual field, although the image may be focused accurately onto the retina. Poor sensitivity to contrast makes it difficult to distinguish details or separate objects from the backgrounds.

When the peripheral retina alone is damaged, adaptations to changes in lighting and the ability to see in low lighting conditions are impaired. If the central or macula region of the retina is involved, then clarity of image and capacity to perceive contrast and colour are also impaired. Conditions that affect the optic nerve and retina include optic nerve atrophy, retinopathy of prematurity, Lebers congenital amaurosis.

Common areas of difficulty:

- Trouble seeing detail
- Trouble seeing if light is low
- Trouble seeing when contrast is poor
- Likely to have trouble seeing if plain surfaces reflect light or when there is glare

Some behavioural clues :

- Brings objects close to see them
- Mistakes people or objects that have the same general shape
- Does not respond to facial expressions
- Shy, hesitant or reserved when light is poor (example in the evenings)
- Squints, blinks, hesitates, cries when going outdoors into the light

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Some strategies :

- Increase the size of the object
- Outline shapes, work areas and increase contrast
- Use non-glare surfaces and objects
- Adjust the direction and intensity of light

Completeness : The field of vision refers to the entire area that can be seen without shifting the head or the eyes. Look straight ahead and ask a friend to bring some common object into your field of view from behind your head about 6 inches away from your body at eye level and then from over the top of your head to get a sense of the size of your field of vision. Field loss can be caused by damage to the retina, optic nerve or visual pathways and the area of loss depends on the location of the damage.

For example, looking straight ahead, a person with **peripheral field loss** or tunnel vision may not see things at the top, bottom or sides, or any combination of these positions. Since the central fields, where the cones are largely located, are intact, the image clarity should not be affected, but the restricted field of vision makes it hard to see things nearby. Cones function best in bright light, so low lighting and changes in lighting are hard for children with peripheral field loss to adapt to. If objects are very large (for example a large picture), or there is a lot of quick or unpredictable movement (for example when signing or watching a ball game), the small visual field makes it difficult to get a sense of the whole, and the child may benefit from viewing from a greater distance.

Activity :

Poke small holes in a piece of cardboard and hold it in front of your eyes so that you can only see through the center and you will quickly realize that it is easiest to see small objects, objects that are further away and those that are not moving quickly.

Common areas of difficulty :

- Trouble adapting to changes in lighting
- Trouble seeing in low lighting
- Miss people or objects to the sides, above and below eye level

Some behavioural clues :

● Turns head to one side of the object being viewed (effectively using one eye to see it)
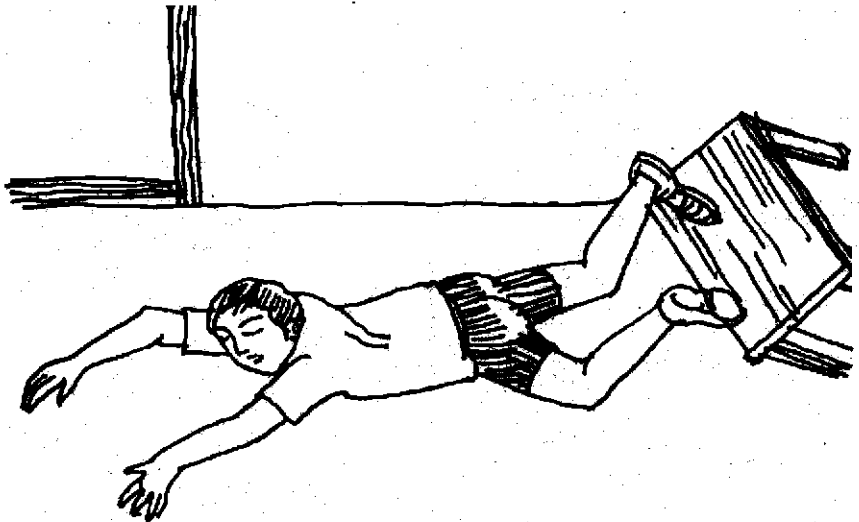
● Often bumps into things, misses things that are close by

● Holds objects at arms length or moves back to see

● Has trouble following quickly moving objects; does not like outdoor games

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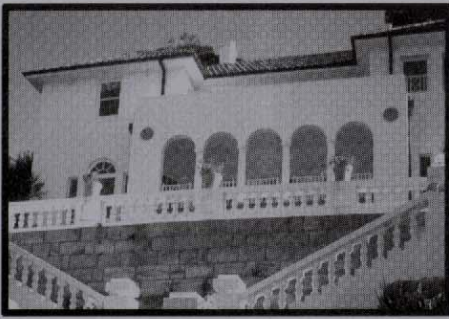
Normal

Hemianopsia
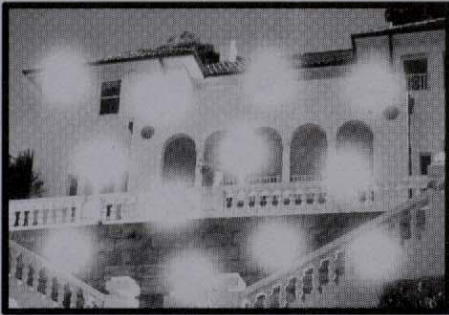
Blind spots
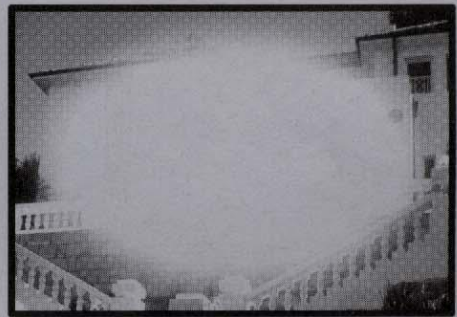
Central field loss
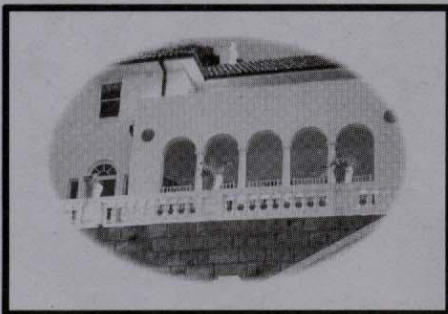
Tunnel Vision

Central field loss means that only the peripheral vision is intact although depending on the degree of damage, some central vision may remain. Hemianopsia is a type of field loss that results in the loss of half of the entire visual field. Field loss can also be in the form of blind spots scattered across the visual field. People who have tunnel vision even

if central vision is retained will see as though looking through a tube. Other things around will not be visible. All these conditions often have some damage to the central portion of the retina. Since cones (responsible for detailed vision and colour) are found mostly in the macula in the central area of the retina, when this area is damaged, clarity is also affected. Look directly ahead and without shifting your gaze, describe in detail the things you see to the left and right of your body. You will realize that colours and forms are not too clear and you may have trouble even recognizing some of the objects! Retinitis pigmentosa, macular degeneration, retinal detachment, glaucoma, tumours and lesions in the visual pathways are some conditions that can cause field loss.

Common areas of difficulty :

● Miss objects when placed in certain areas

● Clarity is affected (contrast, colour & detail)

Some behavioural clues :

● Does not look directly at object or person

● Angles head in odd ways to find best viewing position

● Bumps into objects, doesn't notice objects in some areas

Some strategies for both kinds of field loss :

● Find the best viewing distance for presenting objects of a particular size

● Increase light on object (Tunnel vision), avoid glare (central vision loss)

● Teach strategies for systematic visual scanning and searching

● Mark work, play and living areas clearly

Comprehension : The optic nerve carries the image to the visual cortex as electrical impulses where it is processed and recognized as images. When there is damage to the visual cortex, the brain does not consistently understand or interpret what the eyes see. Visual processing problems are most commonly associated with additional impairments as the condition often results from an insult to the brain. Cortical visual impairment, where the visual cortex has been damaged, can vary in severity depending on the extent and kind of damage.

The prognosis for this condition varies depending on the severity of the damage. As the nervous system gains maturity or when the swelling that accompanies injuries or infection is reduced, some improvement in visual responses is often seen. Many of these children appear totally unresponsive visually when very young and then show gradual increase

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in visual functioning. Experiencing objects, environments and people with their other senses help these children in assigning meaning to the confusing visual images they receive. For example, when we reach for a bottle of water on a table in the night, what we actually see is some reflections off the glass or plastic and perhaps a vague shape. From our past visual and tactual experiences with bottles, we are able to assign meaning to these confusing visual images, recognizing it as a bottle.
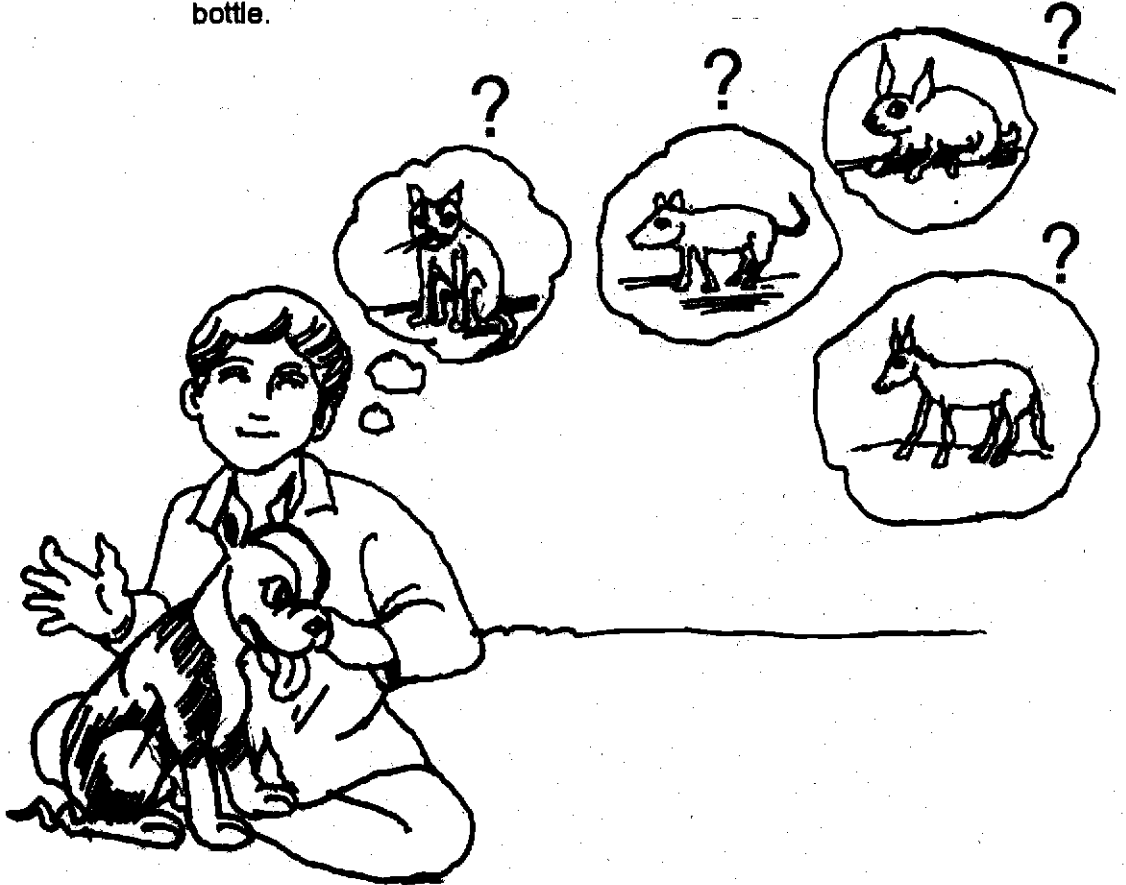
Common areas of difficulty :

- Able to recognize familiar objects, trouble with new ones
- Easily overwhelmed when several senses need to be used together
- Trouble distinguishing object from background

Some behavioural clues :

- Prefers tactile and auditory to visual exploration
- May use peripheral vision to locate objects
- May be visually unresponsive or inattentive
- May not make eye contact, or have very brief eye contact

Some strategies :

- Use multi-sensory approach
- Reduce visual distractions – the number of objects in the environment
- Use single coloured, clearly outlined objects

Many visual conditions result in a combination of these problems since several parts of the visual system may be affected.

Activity : Have participants put on simulators that mimic different eye conditions. Give them a task that involves moving from one place to the other, another that involves performing a fine motor task and a third that involves describing a picture or photograph. As one participant does an activity, the others note down their observations in two columns. One details behaviors they notice and the other conditions that improve performance.

Additional Reading : Scholl (1986). Diagnosis of visual impairments (pg 47 – 49)

Appendix A : Overview of ocular diseases and disorders

Corn & Koenig (2000).Perspectives on low vision (pg. 3-8)

Blind Babies Foundation (1998) Pediatric Visual Diagnosis Fact Sheets. San Francisco, CA: Blind Babies Foundation

What about the child with a squint?

The muscles that control the eye can have defects in length, position or the capacity to function. The eyes are not aligned correctly. This is variously called squint, cross-eyes or squint-eyes in common usage, but technically referred to as strabismus. When the person has no control over the deviation of the eyes, the condition is called aphoria. When the person can bring the eyes into alignment when looking at an object, the condition is called atropia. Depending on the direction in which the eye or eyes deviate, they are classified as eso (toward the nose), exo (away from the nose), hyper (toward the forehead) and hypo (toward the chin).
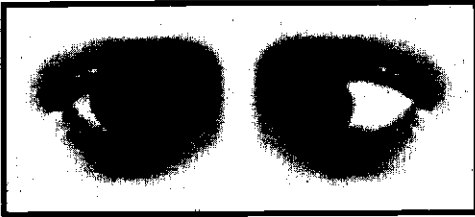
esophoria
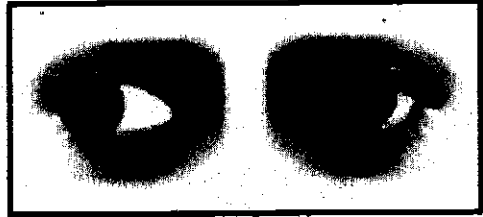
exophoria
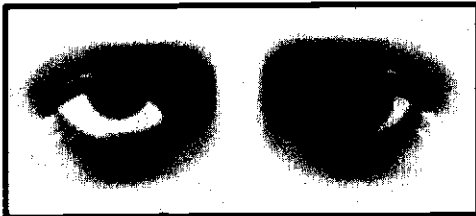
hyerphoria
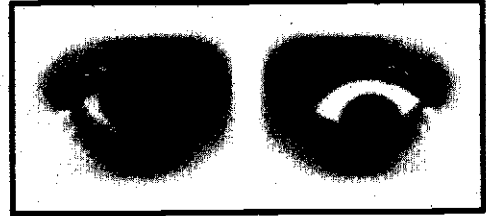
hypophoria

The primary problems associated with having a squint are reduced acuity in one eye and loss of binocular vision. When eyes are not aligned correctly when looking at an object, two dissimilar images are sent to the brain. Unable to combine them into a single image, the brain then favours the image from one eye over the other. Over time, this can result in reduced acuity or capacity to see through the non-favoured eye, a condition known as amblyopia. Strabismus affects the capacity for binocular vision, which affects accurate judgment of depth and distance. Corrective surgery for better muscle balance, and patching of the stronger eye, forcing the weaker one to work, are some ways of treating amblyopia, but need to be done early (before age 5 or 6) in order to be effective in improving visual acuity and binocular functioning. Binocularity is established by about 6 months in an infant and any eye deviations noted beyond that age or severe eye deviations noted prior to that age should lead to immediate referral to an ophthalmologist. Many children with neurological impairments have strabismus. Strabismus should be noted in a functional vision evaluation and the child should be referred for medical management. Children will tend to

show a strong preference for one eye and when amblyopia is accompanied by movement and coordination issues that extend to the whole body, the child may miss objects in the weaker eye since turning the head to follow or look at objects may be difficult.

What is nystagmus?

Nystagmus is an involuntary, rhythmic movement of the eye or eyes and has no known cause. Pendular nystagmus is a rhythmic up and down movement, while jerky nystagmus is a slow movement in either a vertical or a horizontal direction followed by a quick return movement. Nystagmus is typically associated with neurological conditions. Pendular nystagmus is associated with cataracts, corneal opacities, albinism and optic atrophy. The presence of nystagmus is thought to be indicative of the presence of vision, although the vision may be very severely impaired. Sometimes nystagmus shows gradual, spontaneous improvement through the childhood years. Children with nystagmus often tilt their heads to limit or reduce the movement (called the null point) and should therefore be allowed to maintain such positions for better viewing.

What is a functional vision assessment?

Functional vision assessment focus on gathering information about how children use their vision to explore, learn, plan and execute their plans in the context of their daily activities. Use of vision is typically observed in the areas of movement, communication, and interaction with people and objects. Identifying the circumstances and strategies that facilitate the use of vision and determining how best to support the child's learning and development are major objectives of a functional vision assessment. A functional evaluation is particularly relevant when a child has multiple impairments because the combination of impairments may result in the child using vision very differently from what the visual diagnosis alone would lead you to expect. Additionally, ophthalmologists and optometrists often find children with multiple impairments difficult to test since many tests require cooperation and participation on the part of the child, require communicative or motor competence or attention at a level that is hard for many of our students to sustain.

In functional vision assessments, we want to understand how he currently uses vision and what we could do to encourage and support the consistent and effective use of vision in the context of the child's daily activities and environments 4 questions guide the assessment.

1. What does the child see?
2. What does the child vision for?
3. What affects the use of vision?
4. What will help the child use vision better?

How do I know if the child has actually seen something?

Some children you assess may be able to speak, sign, point or follow instructions so that you can evaluate their responses to various visual stimuli quite easily. However, many children with multiple impairments will have trouble with speech and may have severe language delays. When assessing such children, look for visual and non-visual responses. Some of the common responses are listed below:

Visual responses

- Searching movements of the eyes
- Turning eyes toward the stimulus
- Turning eyes away from the stimulus
- Closing eyes
- Increase in nystagmus

Non-visual responses

- Increased motor activity or stilling
- Rapid breathing or holding breath
- Moving head toward the stimulus
- Startling
- Stilling, clenching and unclenching of hands
- Change in facial expression

So, how do I conduct a functional vision evaluation?

Establish reason for evaluation : Prior to a functional vision evaluation, you must be very clear about your reason for assessment. Is it to get a general understanding of the child's use of vision? Is it to support a communication evaluation? Is it a part of an evaluation of the child's performance in another area or skill? The activities you will observe, the environments you will observe the child in and the questions you will be trying to answer will differ based on the reason for evaluation.

Gather relevant information : A functional vision assessment must always begin with gathering information through conversations with the family, examination of medical reports and observation of the child in routine activities. Much of the information you need to know is already available with the people who interact with the child on a regular basis.

Three major sources of information include

1. **The parents and family members** who interact with the child on a daily basis and have intimate knowledge of the experiences the child has had, what the child is typically able to do, and how the child's capacities have changed over time. They will also be able to tell you the child's favourite objects and activities and things the child dislikes. This information is essential before you begin your assessment.

2. **The teacher,** rehabilitation worker or neighbours who interact with the child in different environments and can give examples of functioning in new situations and with new people.
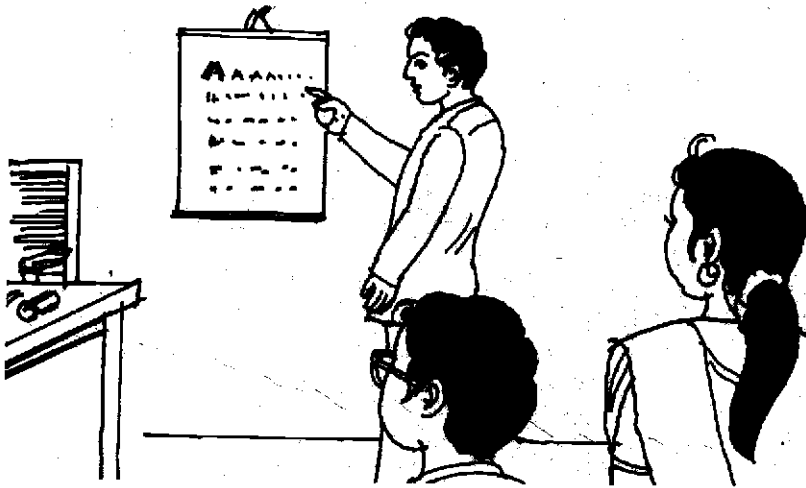
3. **The ophthalmologist** who can give medical information about the child's visual condition, including implications for general health and future potential health concerns. When a child is very young or has multiple impairments, medical examination is challenging as it often depends on child cooperation and understanding of the process. When this is not possible, sedation of the child may be required along with testing using complex and expensive machinery. Precise diagnosis may require a series of tests and many times the doctor will choose not put forward a definitive diagnosis. When a diagnosis is not available, ask the doctor to tell you which parts of the visual system could be affected. This will help you anticipate the possible problems that child may have in using vision.

Observation : Particularly with children with multiple impairments, you should plan to carry out your evaluation over several sessions. This

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will give you time to get to know the child and to observe functioning across several situation during different parts of the day. Observe the child during functional activities, particularly in movement, communication, exploration and activities of daily living, looking for the behaviours that will give you clues as to the quality of the image the child is seeing. Notice what objects the child sees and what seems to help the child see better. Notice how, when and why the child uses vision. Write down your assumptions which you will test through structured assessments. During observations and the structured assessments, keep in mind that various factors can influence a child's visual performance.

Structured testing : Then systematically try to see if you were correct through structured interaction with the child.

Activity : Observe a child (video or actual child) as he is engaged in some routine activity. Make notes about behaviors you see to ask about the child's vision and use of vision.

How do you carry out structured testing?

Throughout the assessment, note

- what she uses vision for
- the way she holds her head and body in order to see
- if her eyes seem to be moving and working together
- what lighting conditions help her see best
- how much of time is needed for her to adjust to changes in lighting
- how pace of the activity and changes in position affect her capacity to use vision

During assessment, always start with what is easy to respond to and then move to objects that are harder to see

Children may attend visually to
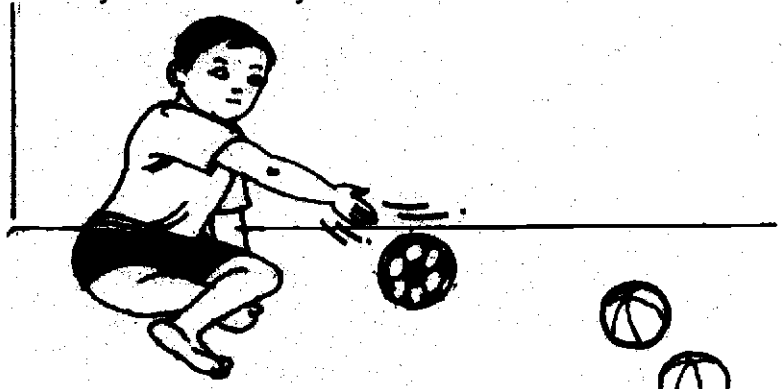
- patterned objects more easily than plain ones

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- high contrast objects more easily than low contrast ones
- visually simple objects more easily than visually complex ones
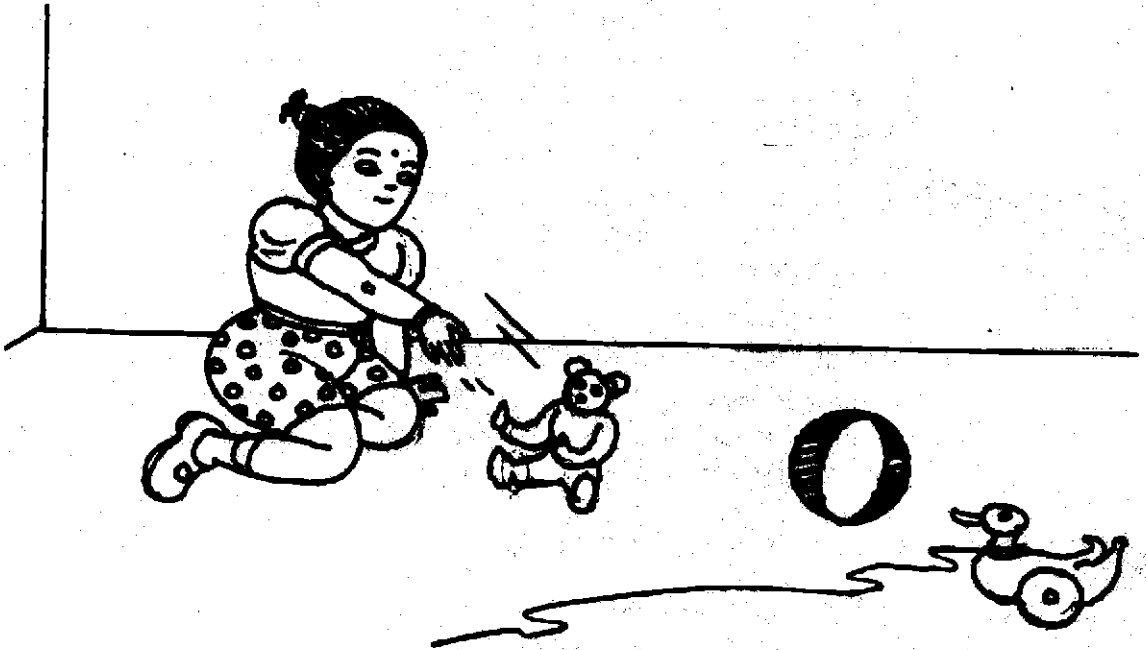
- nearby objects more easily than ones that are far away

Some children are motivated to look at novel objects, but ignore familiar ones. They may habituate or get bored quickly with new objects. For other children, particularly those who have cortical visual impairments, visual response may be obtained only with familiar objects. Some children will need to handle, explore, and experience objects for a while before responding to them visually. For others, shaking the object or making a sound near or with the object may help the child visually locate and maintain gaze on the object. Find out what motivates visual attention and helps maintain it prior to your assessment.

Select the environment where your assessment will take place carefully.

During play/interaction utilizing near vision (usually at about 14 to 16 inches), observe whether she sees:

- toys of different sizes at different distances
- toys of different colours against contrasting and non-contrasting background
- toys presented in different segments of the child's visual fields

And whether she shows a strong preference in any of these features.

Also see whether she can

- follow a moving object in various directions –vertical, horizontal, circular
- find an object easily among other scattered toys (remember to use objects she likes!)
- reach directly for an object, judge distance well

During play/interaction utilizing distance vision, observe whether she :

- sees objects of different sizes at different distances
- follows moving objects in different directions (for example a person walking by, a rolling ball, a floating balloon)
- locates an object or person among others
- recognizes, imitates people at a distance
- notices people or objects that are in her field of vision
- if she is mobile, can she avoid obstacles above, below and to the sides

Establishing a clear visual boundary, such as a large mat or a small room may help the child maintain visual attention at a distance. Also ensure that the walls and floors are not visually distracting and are not reflective surfaces.

When a child displays no visual responses :

- darken the room and introduce a bright light to see if you get awareness, orientation or localization
- check for the presence of reflexive visual responses such as blink response to visual threat. Keep your fingers wide apart and bring it suddenly in front of the child's eyes ensuring that you do not make a sound and you do not cause a breeze. The child should blink immediately. The absence of a blink, a very delayed blink or inconsistent blink indicates a possible neurological problem or blindness.

Things to watch out for while doing your assessment :

- Learn to read the child's signs
- Let the child set the pace
- Children may get easily bored or quickly over-stimulated
- Traditional near testing is usually done at forty centimetres, while testing for distance is at 6 metres. However, many children find maintaining visual attention at a distance difficult. For testing and functional purposes, establish the distance at which the child is

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able to maintain visual attention with ease and note the size and type of object used.

- Understand the child's developmental level. Some of the problems with vision that you are seeing may have more to do with the general developmental capacity of the child rather than the result of a specific visual impairment.

- With children with severe impairments, and those with severe motor involvement, you may have to wait a long time before the child can organize his system adequately to give you a response.

Activity : Create a recording format in pairs. This format is to be used during the assessments and form the basis of the report that will be generated later.

There is so much information to gather, how do I stay organized?

Prior to your assessment, go through everything you have learnt about the child and list the questions you will be addressing in the assessment with a space for your notes under each. This reminds you to interpret the child's behaviour and actions in the context of your questions.

Organize the environment so that it allows you to see functioning in the different lighting and space conditions that are relevant to the child's life.

Set up your materials or activities in separate boxes so that they are easily accessible to you and you do not miss any area of testing. Ensure that they are all not visible together or at least not distracting to the child.

Mark basic distances in the working areas– 6, 4, 2, and 1meters, 40 and 20 cm - so you do not have to measure while interacting with the child.

If possible, get someone to observe with you since it is challenging to interact with the child, set up the visual environment and make good observations at the same time! Make sure that the person has had access to all the information you gathered prior to your structured testing and that you both know the questions that guide the assessment.

What kind of information should a functional vision report include?

All functional assessments should cover the basic information listed below. Additionally, the report should put this information in the context of functional activities, by describing the child's use of vision in communication, movement and in learning about objects, people and the environment, making suggestions on how to facilitate the use of vision and identifying what useful learning goals could be planned.

Implications of diagnosis : Rather than simply repeating the medical report, interpret it so that anyone interacting with the child understands. Mention the stability of the eye condition, the medical cautions (for example, avoidance of rough activities when the child is at risk for retinal detachment) and whether the child needs to use eye drops, wear glasses or other related items. Include information on the appearance of the eyes (including strabismus and nystagmus) and the typical position of the eyes and head.

Learning style : Does the child use vision as the primary method of gathering information? Can the child use vision along with other sensory inputs?

Response to visual stimuli : Describe how the child indicates visual interest in an object. Include both visual and non-visual responses and such things as the position of the head and eyes.

Good materials to use : Based on your assessment, you should be able to suggest the contrast, colour and size of materials that are most easily perceived by the child. Include information on whether the object needs to be moving for the child to see it initially or for the child to be able to maintain visual attention.

Pacing : Some children need time to process sensory inputs before they are able to respond to it. Children with neurological and motor impairments, and very restricted fields may find it difficult to follow rapid movements. When changing a child's position, many children with severe multiple impairments need time to adjust before they are able to attend and respond to visual stimuli.

Position and distance at which activities/materials need to be presented: As discussed earlier, distance and position are key factors when children have trouble with clarity of the image or when they do not see the complete object. Discuss this information in the context of the activities and environments in which the child typically engages.

Preferred gaze : Children with field loss, nystagmus and motor involvement may need to hold their heads or their eyes in particular ways so as to see most clearly.

Best positions for the child : This is particularly important for the child with motor and neurological involvement where certain positions are particularly hard to maintain and take much of the child's energy. Other positions may trigger reflexive movements that interfere with performance. Positioning can increase a child's capacity to be alert and give attention, reduce fatigue, and strain and facilitate movement and exploration.

Optimal environmental conditions : This includes issues such as lighting, keeping the environment uncluttered, using contrasting background and ability to tolerate other sensory inputs.

Visual fatigue : How long can the child engage in visual tasks? How does the child signal visual fatigue? What modifications (such as reducing glare, changing the child's position) can help reduce visual fatigue?

Recommendations : Recommendations should be embedded throughout the report and summarized in the end. The goal of interventions and recommendations should be to increase visual efficiency and efficiency of task performance. Remember to select activities or skills that are functional, increase the child's independence, occur frequently, and encourage active participation with people and the environment.

Activity : Write a report covering visual functioning in communication, movement and learning, drawing from your recording format. What modifications, if any, would you now want to make to your recording format?

Exchange your report with another group to see if they are able to get a picture of the child and plan interventions.

Large group activity : Come up with a recording format and report writing guidelines.

How do I determine what modifications are appropriate for a child?

Once you have done your assessment, you must decide whether to modify the environment, teach the child a visual skill such as tracking or scanning or to train the child to use vision in the context of a specific activity. These decisions will be discussed more fully in the section on ecological assessments. Discussed below are some common environmental modifications.

Pacing

Pacing is an important consideration in determining the capacity of a child to see. Many children with field defects and those with motor impairments will have trouble following fast movements. Others with central field deficits may have trouble perceiving low contrast stationary objects.

Space

The complexity and clutter of the space as well as the clarity and size of visual boundaries influence the capacity for visual attention and performance.

Illumination

The lighting conditions can dramatically affect the child's visual performance which depend on the kind of visual impairment the child has.

If the child has trouble with controlling light entering the eye, or is sensitive to light and glare, consider using dim to average light.

For children with corneal conditions, optic atrophy and optic nerve hypoplasia, conditions affecting the peripheral retina or the entire retina (such as ROP) consider using average to well-lit environments.

When the child has trouble controlling light entering the eye, ensure that work surfaces are non-reflective and the child is not facing the source of light.

Colour and contrast

Increase contrast and brightness of colour when clarity is impaired, and when central vision or entire retina is affected.

Position

It is particularly important to consider the position of the head and the object when the child has a high refractive error or field loss. Remember that closer is not always better. Apart from hyperopia and myopia, some conditions where position is important are glaucoma, and retinitis pigmentosa. For children with neurological involvement, some positions may trigger reflexes (such as ATNR), interfere with their muscle tone or balance making it difficult to attend or respond to visual stimuli.

How can I prepare a child for formal assessment?

Where possible, prepare children for formal testing by an optometrist who is a low vision specialist. If you can teach the child to point and match, many standardized tests can be carried out with the child to determine visual acuity, contrast sensitivity and colour perception. Following simple commands such as "point to the ___"; "find another one like the one I am showing you" consistently will make formal testing easier. While you may have to carry out the evaluation activities with the child because communication with many of our students is not easy, the optometrist is trained to observe visual functioning and has a whole arsenal of material and tools that will help determine what the child is able to see and what optical and non-optical aids could help.

Things to remember

1. Functional vision assessments focus on gathering information about how children use their vision to explore, learn, plan and execute their plans in the context of their daily activities.

2. Depending on the part of the eye that has been impaired, the clarity, completeness or comprehension of the image received may be affected. Many visual conditions result in a combination of these problems since several parts of the visual system may be affected.

3. Use of vision is often observed in the areas of movement, communication, and interaction with people and objects.

4. The steps in a functional vision evaluation include: gathering information from the family, reviewing medical reports, observation of the child in typical activities, structured assessment.

5. A report should include information on the implication of the diagnosis; the child's learning style; response to visual stimuli; good materials to use; pacing; position and distance at which activities/materials need to be presented; preferred gaze; best positions; optimal environmental conditions; visual fatigue and recommendations.

6. Examine the following dimensions when making environmental and task modifications: time; space; illumination; colour; contrast; and position.

Activities for trainers

1) **Aim** : Writing good educational reports

Materials : Case history of a child and vision report for education.

Activity : Ask teachers to sit in groups and discuss what information they got from the report; whether it was useful in planning for the child and what else they would like to know

Consider :

- The importance of avoiding jargon
- The importance of placing information within the context of the curriculum/ functional areas
- Much of information that is useful to a teacher need not be extremely precise.
- Much of this information can be gathered through systematic observation

2) **Aim** : Developing good observational skills

Materials : Video of a child or actual children

Activity : Describe child's visual functioning and list observations that lead to your conclusion. Ask teachers to list any further questions they may have about the child's vision and activities that they would use to test their assumptions.

3) **Aim** : Thinking actively about assessments

Materials : Variety of materials

Activity : Put together an assessment kit from the given materials, plan activities that can be used with children. Present your kit and suggestions of activities.

Consider :

- The basic characteristics of materials that must be in a kit
- It is possible to do a reasonable assessment with whatever is available

Using what you learnt

1. List common objects that children typically use in their daily lives. Consider how you would adapt them so that a child with poor visual acuity, a child with tunnel vision and a child with scattered scotomas would be better able to use vision when using them.

2. Look through the medical and birth history of a child in your class and list the areas of visual functioning that you think may be a problem for this child.

3. Think of a child you are serving who has visual impairments and additional disabilities. What recommendations can you make for environmental modifications in the classroom or in the house for this child?

Reading list

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Ferrell, Kay Alicyn (1996). Reach out and Teach. Parent's Handbook. New York, USA: American Foundation for the Blind.

Hyvarinen, Lea (1988). Vision in children normal and abnormal. Ontario, Canada: The Canadian Deaf-Blind & Rubella Association.

FUNCTIONAL ASSESSMENT OF HEARING

- Dipti Karnad

In this module, you will learn about

- definition of hearing impairment
- basic anatomy and physiology of the hearing mechanism
- major factors to be considered when talking of hearing impairment.
- what are functional assessments in hearing and why they are difficult.
- how to plan and carry out a functional hearing assessment

Definition of hearing impairment

Hearing is a primary sense that helps us to access information through the ear and connects us to people and things in our environment. Hearing Impairment is a condition in which a child or adult suffers from difficulty in hearing. According to the Persons With Disability Act of 1995, "Hearing Impairment means a loss of 60 decibels or more in the better ear in the conversational range of frequencies (loudness)". 60 db is normal conversational level.

Early signs of Hearing Impairment are

- a sleeping infant does not awaken to hear noises.
- babbling remains monotonous containing only vowel sounds.
- instead of becoming more specific and acquiring meaning, the hearing impaired child babbles less and less over time becoming mute by one year of age.
- without the ability to imitate, repeat, and associate sounds with meaning, vocalizations decline.
- receptive language also lags.

BASIC ANATOMY AND PHYSIOLOGY OF THE HEARING MECHANISM.
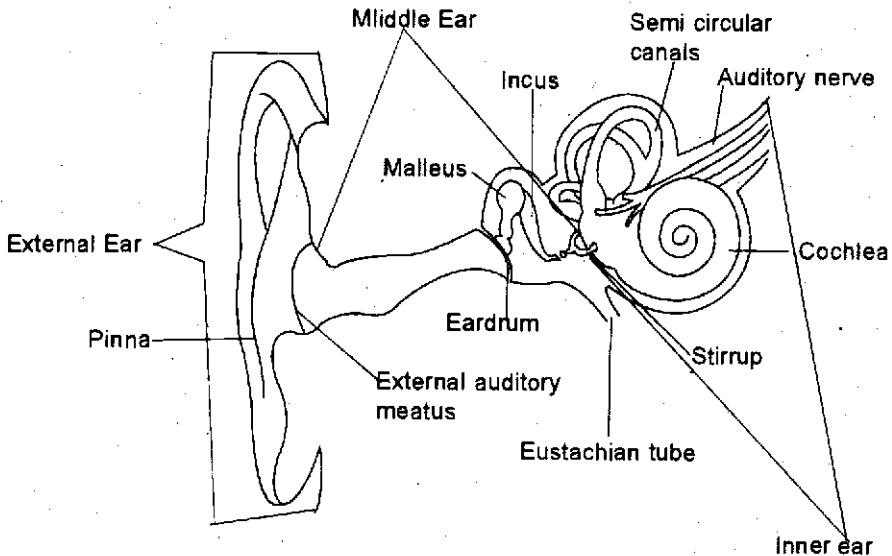
The ear is described as the masterpiece of biological engineering.

We have two ears placed on either side of the head in a symmetrical way. The important parts of the ear are hidden inside the head. The whole of the auditory system covers a length of not more than 4 – 5 inches within the head.

The auditory system generally called the EAR is divided into three parts namely

● external ear.

● middle ear.

● inner ear.

External ear : The external ear or the outer ear consists of the pinna or the auricle and the ear canal or the **external auditory meatus**. The pinna collects the sound waves and sends them through the auditory meatus. The waves then hit the eardrum or tympanic membrane, which begins to vibrate.

Middle ear : The middle ear is a small air filled cavity of about 2 cc volumes. the eardrum separates the external ear from the middle ear. The important parts of the middle ear are eardrum, ossicles, middle ear muscle, eustachian tube. The eardrum forms the outer wall of the middle ear cavity.

Ossicles are three little bones in the middle ear known as **malleus, incus, stapes** or hammer, anvil and stirrup due to their shape. These

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bones are joined to one another and form a chain. this chain of ossicles is suspended in the air filled middle ear cavity. It connects the tympanic membrane to the inner ear.

The function of the middle ear is to act like a transformer by boosting the energy of the sound waves that have entered from the outer ear to the middle ear as it passes into the inner ear.

Inner ear: the inner ear houses the snail like organ of hearing called as **cochlea,** as well as the 3 **semi circular canals** that are the organs of balance. The cochlea has tiny hair like cells that are converted to electrical impulses and sent to the auditory cortex of the brain through the auditory nerve.
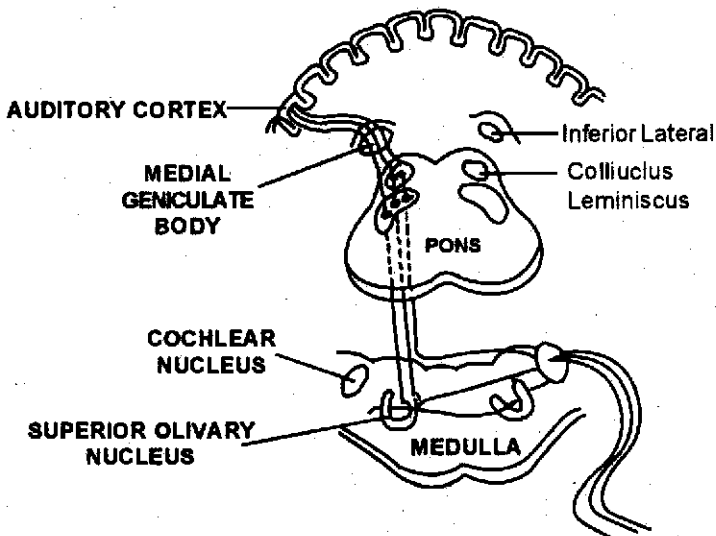
Any problems in the external, middle, inner or the auditory nerve may result in hearing impairment.

Major factors to be considered when talking of hearing impairment include

- age of onset
- degree of hearing loss
- type of hearing loss.
- Age of onset refers to the age at which the problem started. It is important to know this, so that a rehabilitation programme could be developed.
- Degree of hearing loss refers to the extent of hearing loss. It could be classified as
- Normal hearing – 0 to 15 dB
- Minimal loss -15 to 25 dB.
- Mild loss   - 25 to 40 dB

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- Moderate loss – 41 to 55 dB
- Moderately severe loss- 56 to 70 dB
- Severe loss - 71 to 90 dB
- Profound loss- 90 dB and above.

Hearing Loss can be measured and quantified as above using audiometric techniques. The hearing loss is plotted on an audiogram.

Types of hearing loss could be

1. **Conductive hearing loss** due to absence of pinna, presence of wax, or any malfunction of the outer or middle ear resulting in the blocking of sound waves to the inner ear.
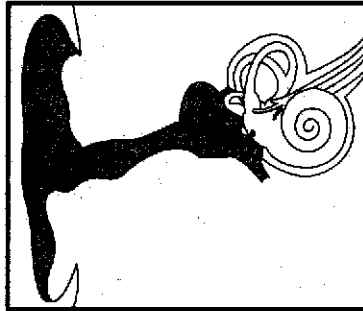
2. **Sensori-neural hearing loss** is caused due to the damage to the cochlea or auditory nerve. Infections, genetic diseases, trauma, old age or noise may cause permanent damage leading to Sensori neural hearing loss.
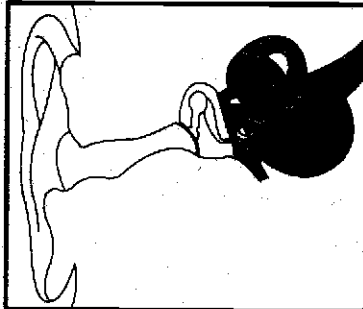
3. When both conductive loss and sensori neural haring loss are present, then a **Mixed hearing loss** results.
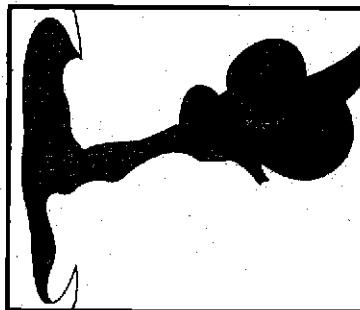
4. Central hearing problems/Central auditory disorders are caused when the auditory pathway leading to the brain is damaged. Although the audiogram may show normal hearing, the person will have problems in understanding, analyzing, remembering and selecting sounds and will have difficulty in processing both speech and language.

Functional Hearing Assessment

Why do a functional hearing assessment

- Hearing impairment passes off as undetected till the age of one or two years.

- Hearing impairment can be "hidden" if parents and professionals are not observant.

- Hearing impairment in childhood has serious impact on normal acquisition of speech and language

- Standardized test norms may not be appropriate for deafblind population as many items tend to rely on vision and hearing

- Medical examination can only tell of potential capacity

- Resulting information may not be useful for planning, which may result in delay in intervention.

- dual sensory impairments result in problems in speech, communication, motor and cognitive skills.

What do we gain from functional hearing assessment

- we can identify the current levels of functioning in hearing

- this enables us to set goals to develop hearing behaviour

- functional hearing assessment helps evaluate efficacy of teaching auditory responses.

How to go about functional hearing assessment

- establish reason for testing

- identify sources of information

- ask the parent/caregiver about observations and concerns

- select appropriate tools for gathering information like interviewing, looking at medical records, and observations.

- use selected stimuli such as parents / caregiver's voice, sound making toys etc. to get responses.

- choose a familiar but quiet place to conduct assessment.

- place the child in a comfortable position to allow an unobstructed view of his/her possible responses.

- position yourself to be able to present sounds at different locations and observe responses or take turns with the parent/ caregiver to present sounds and observe responses.

- establish rapport and observe the child before presenting sound stimulus to become familiar with his/her typical behaviours.

- select sounds and words to which the child has been exposed or which may be developmentally appropriate.

- include speech, sound making toys and environmental sounds.

- response to a sound stimulus may be observed as a change in
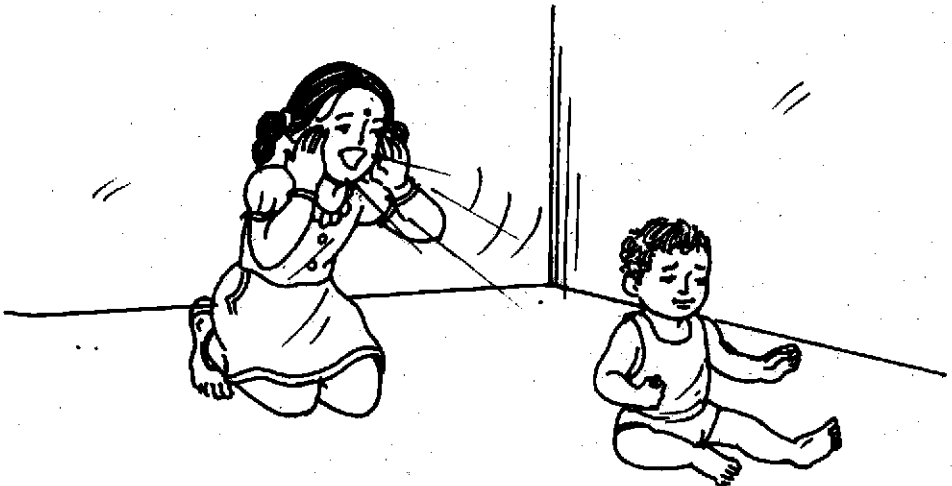
a) activity level: a startle or sudden movement of the body or limbs , an increase or decrease in movement or vocalization .

b) body posture: head turn, reaching or body orientation.

c) facial expression: smile or laughter, frowning, eye widening, searching, or blinking.

- if no responses are observed, it may not mean that the child does not hear, however he may be referred for a formal hearing test.

Pointers to functional hearing assessment

- Is the child aware of sound?

- Is he alert to sound, orients to sound, localize sounds, isolates a specific sound in the presence of other sounds?

- Does the child respond to a selected sound among other sounds?

- Does the child appear to use hearing to respond during the assessment—to voice? music? speech?

- Are hearing aids recommended/ tolerated/ in use?

What kinds of sounds?

Soft sounds – whispering child's name
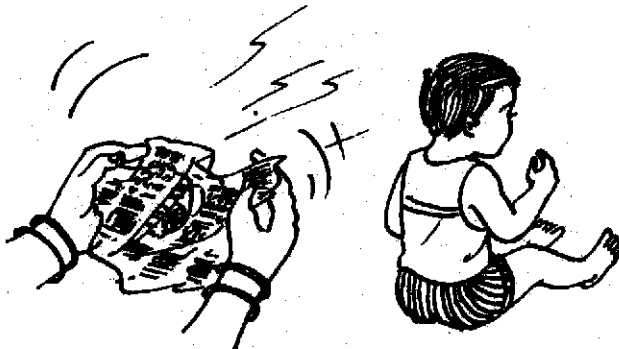
Crumpling of chocolate paper

rustling of plastic bag
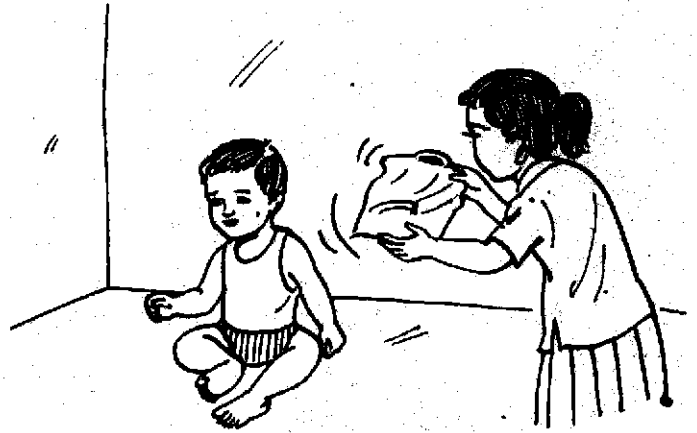
Snapping fingers

anklet sounds

GALL
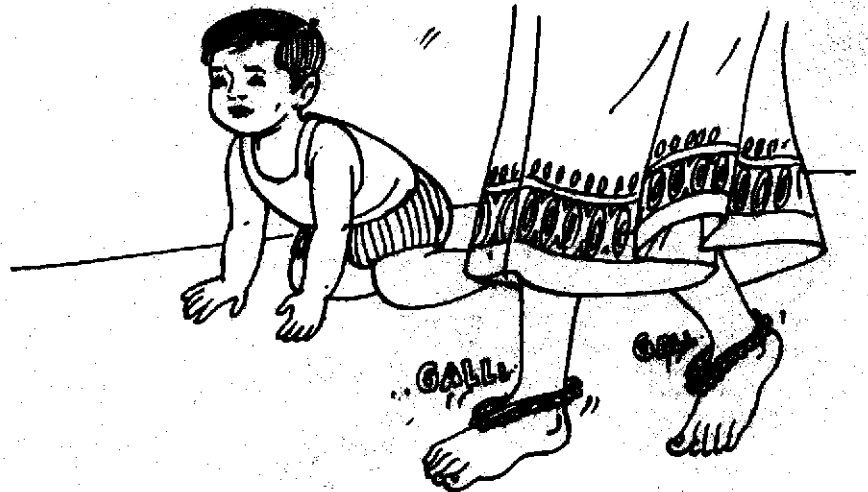
Indoor sounds

Speech
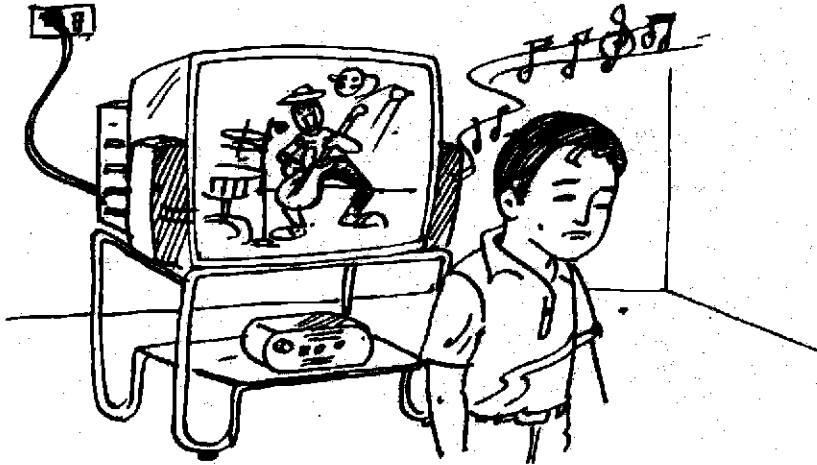
radio/television

music

Squeaky or sound
making toys

Outdoor
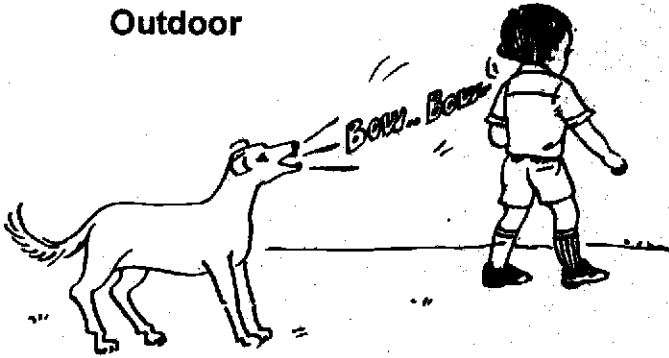
Dog barking

footsteps
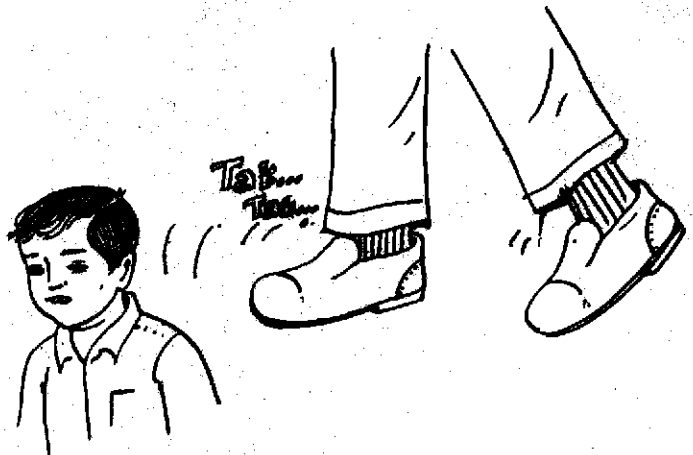
vehicles
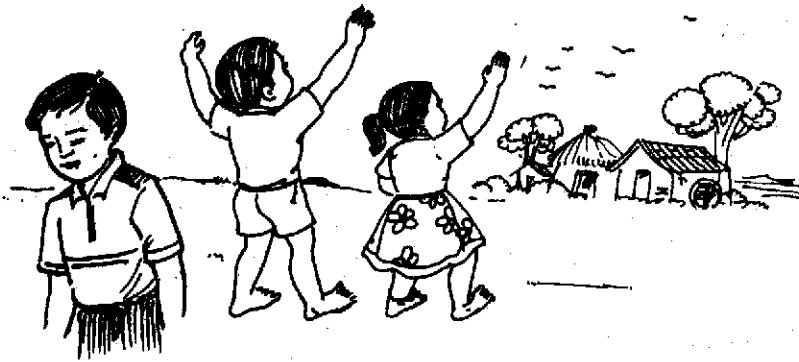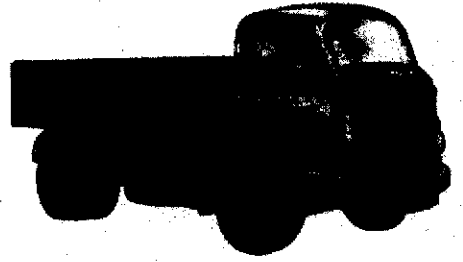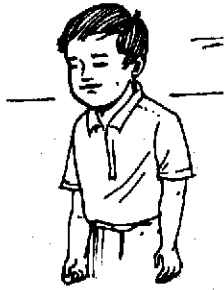
Plane flying overhead

Diwali Fireworks

Two match sticks in a matchbox and two soft drink bottle caps tied with a thread are known to produce peak around *500 Hertz and 4000 Hertz respectively with 40dB* Sound Pressure Level (SPL) intensity. These no-cost devices work as an excellent hearing-screening tool to screen
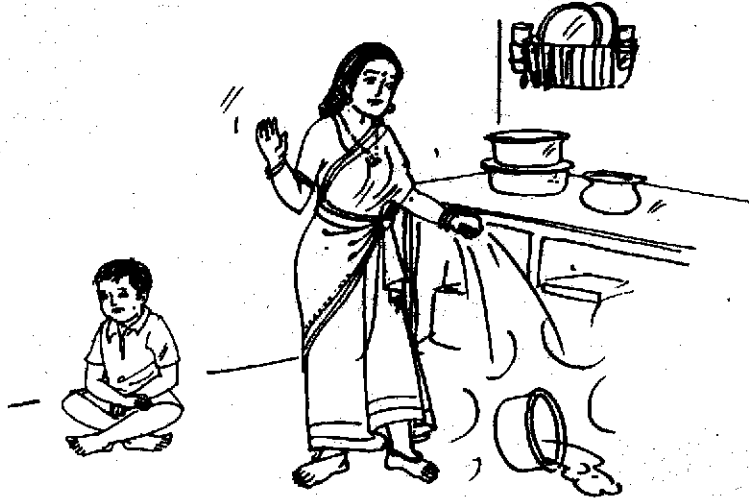
children in the range of 6 months to 2 years of age. They are being used in the field after testing in All India Institute of Speech and Hearing, Mysore and Regional Rehabilitation Training Centre, Chennai (1986).

*40 dB at 500 Hz consonants m, d ,b and vowels i, a, o, r.

 40 dB at 4000 Hz whispering and consonants f,th,sh

Informal hearing tests for various ages

The expected responses of a normally hearing child to various sound stimuli at different age levels are:

- **Birth to four months of age** : A simple arousal test using a loud sound to awaken the child has been accepted as an informal hearing test. In addition, to this, widening of the eyes, eye blink, frowning etc. are other common body responses. If the child fails to respond to three successive sound presentations, refer the child for a formal hearing test.
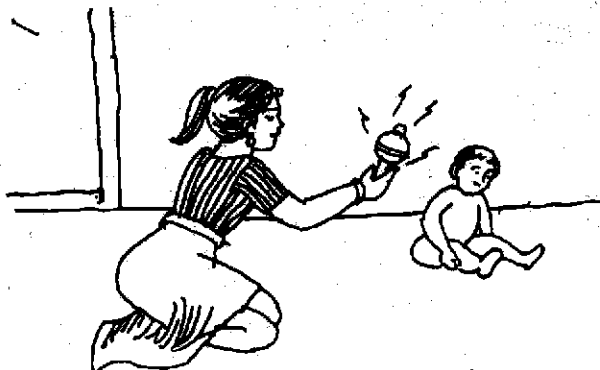
- **Four to seven months of age** : This stimulus should be presented out of the child's field of vision and at a distance of one foot. An immature head turn in a horizontal plane, or a wobble of the head, is observed as a response to sound. This response pattern gradually matures, and around six months of age the head turn is definite.
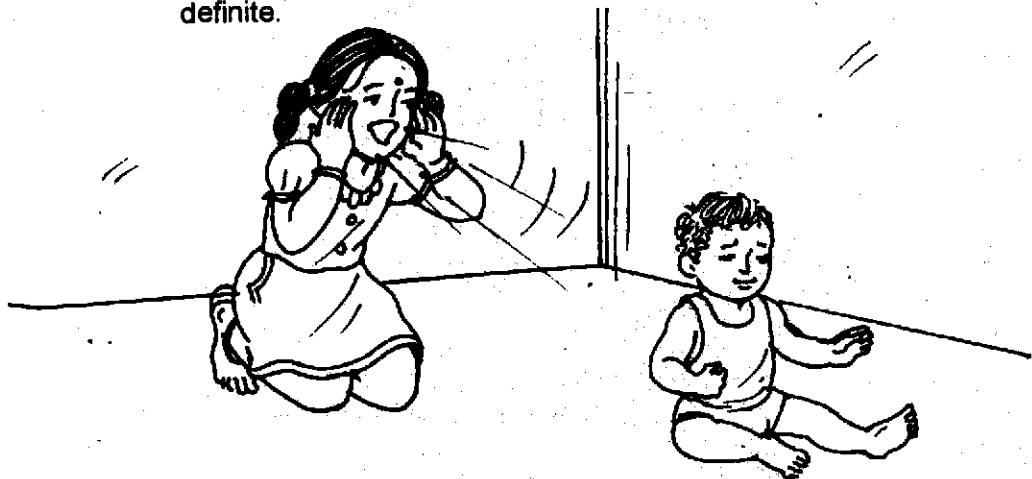
Normally by this age, the child responds to familiar voices of parents and of siblings. He smiles, stops crying and interrupts his play when he hears these familiar voices. The mother should be asked whether her child is responding in this way. If the child fails to respond, a formal hearing test is required.

- **Seven to twelve months of age** : The sound is presented in various planes, such as at the side, below the child and indirectly above, at a distance of one foot from the child. The sound should not be presented within the child's field of vision. The response expected from a child with normal hearing would be a turning of the head towards the source of the sound.
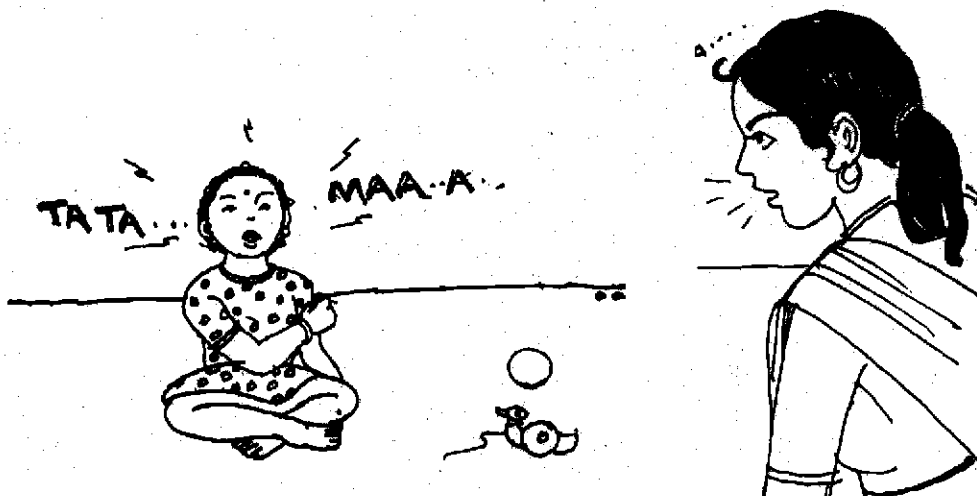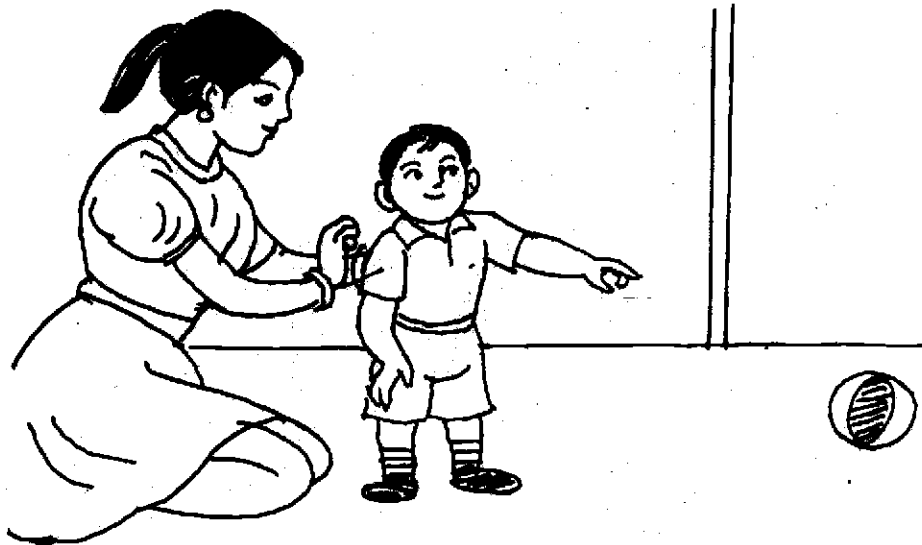
By this age, the child can understand the meaning of the word 'no'. His babbling (i.e. vocalizations like ba-ba-ba, da-da-da) increases. By the age of ten months, he will look towards the object named. If you ask, 'Where is the ball?' he will look around for it. The parents have to be asked whether the child is capable of making such responses.

● **Thirteen to twenty-four months of age** : The child of one year of age or above demonstrates orientation to the sound source by locating a sound, presented at any angle. The full maturation of the auditory behaviour of the child occurs at about eighteen months, and does not
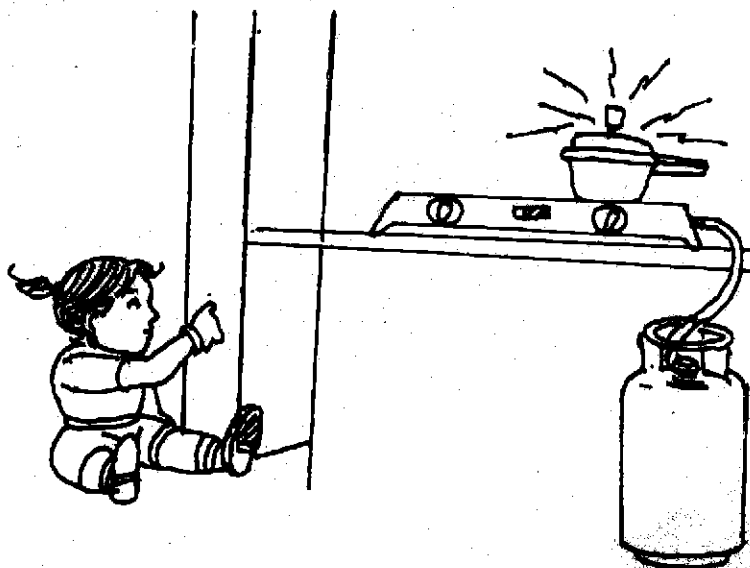
change significantly after that. Spontaneous expressive language i.e. speech development is another strong indicator for normal hearing sensitivity. But specific information from the parent can help to give a better idea of the child's ability.

Awareness/reflexive and attention/alerting levels

1.   Does the child respond to environmental sounds such as

- A door slamming?
- A telephone ringing?
- A dog barking?
- Sound of mixie /pressure cooker whistle?
- Water falling in to a bucket?
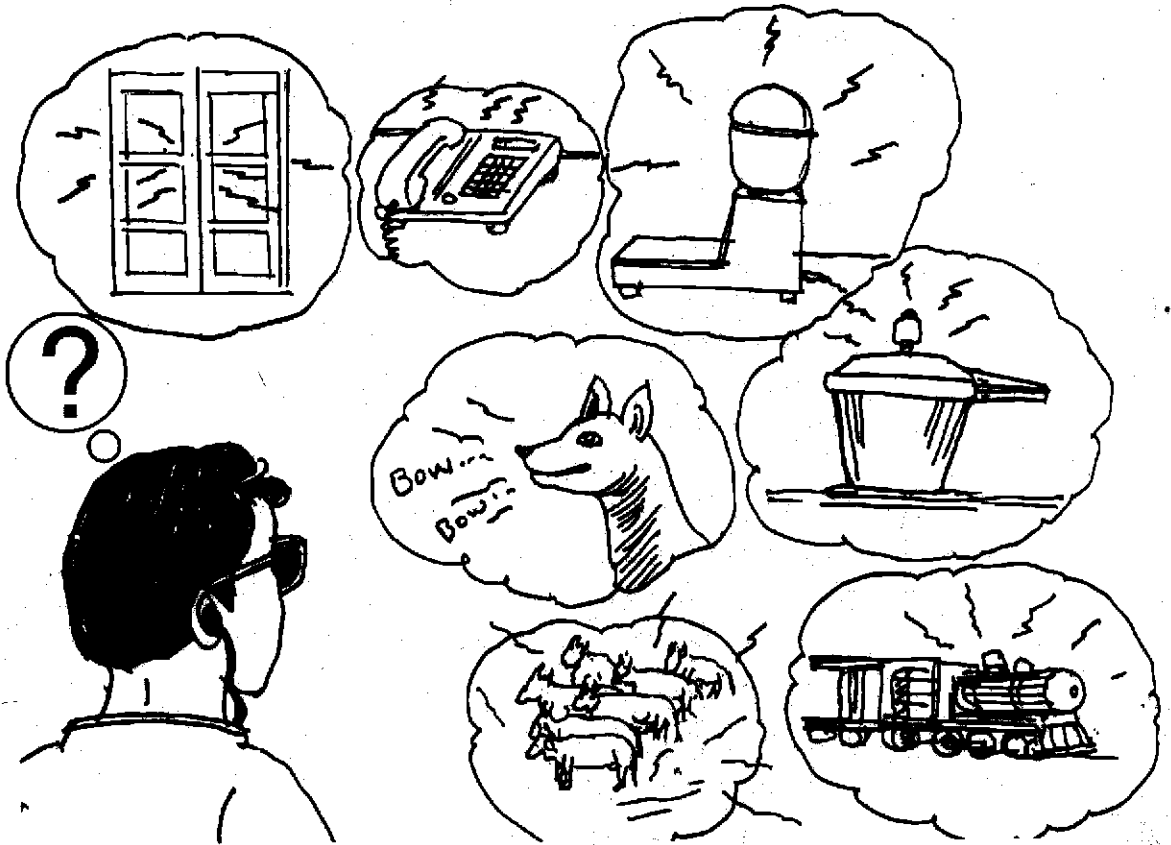
2. Does the child respond to music (e.g. familiar person singing, musical instruments, radio, musical toys, tape recorder, television)

3. Does the child respond to voice/speech of other children or adults?

Localization

1. Does the child turn towards sounds in the environment?

2. Does the child turn towards familiar voices?

3. Can the child find familiar toys in his environment form auditory cues alone?

Auditory Discrimination

1. Does the child look directly towards the door when it opens/slams or there is a knock? Does he/she reacts when the phone rings?

2. Does the child respond differently to mother's or primary caregiver's voice rather than a stranger's voice?

Auditory Recognition

1. Does the child respond appropriately to verbal cues?

    Describe the situation as well as the verbal cue the child recognizes:

2. Does the child anticipate an event on hearing an environmental cue:

    For example - anticipating father coming when he/she hears the sound of scooter /motorbike, anticipating mealtime when he/she hears the sounds of clanking of utensils.

    Describe the situation, the environmental signal and the child's behaviour which demonstrates recognition:

3. Does the child respond to changes in tone of voice such as warm praise as opposed to an angry voice?

4. Does the child respond specifically to his/her name?

5. Does the child recognize familiar songs/games/finger plays by beginning to perform the actions from the verbal cues alone?

    Describe the child's responses :

6. Describe how the child responds to familiar simple commands – "come,go,give me,no,stop,stand up,sit down".

Behavioural symptoms of hearing impairment among children in older age group (two years and above)

A severe to profound hearing loss can be detected very easily, as the symptoms are obvious. However, a mild or a moderate loss may go

undetected. These children may be labeled as 'dull', 'stubborn', and 'inattentive'.

If a child presents any of the following symptoms he may be having a possible hearing loss. If any of these are detected, he should be referred for formal hearing tests. The teacher and parents can use the following checklist to identify hearing-impaired children.
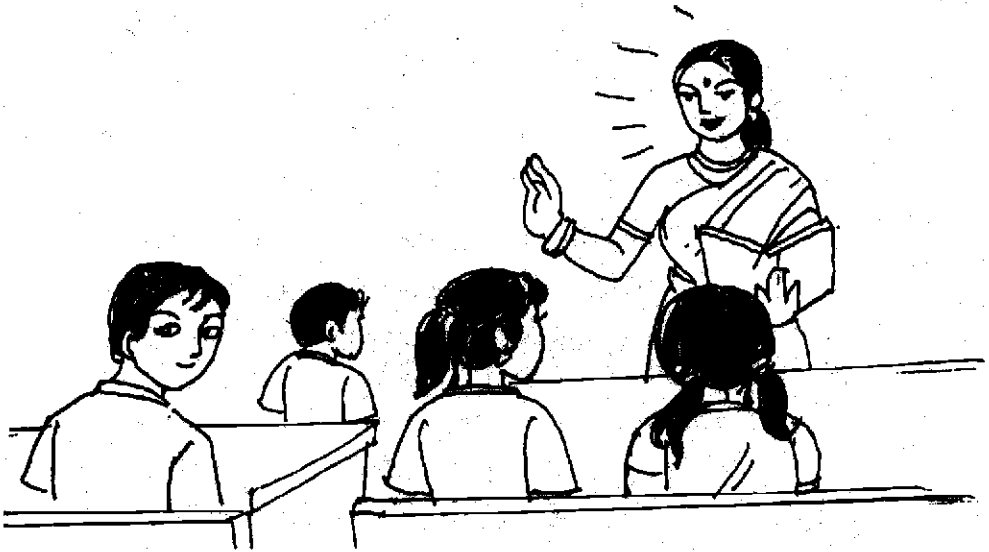
1. The child has problems paying attention in the school.
2. The child finds it difficult to understand speech if presented behind him.
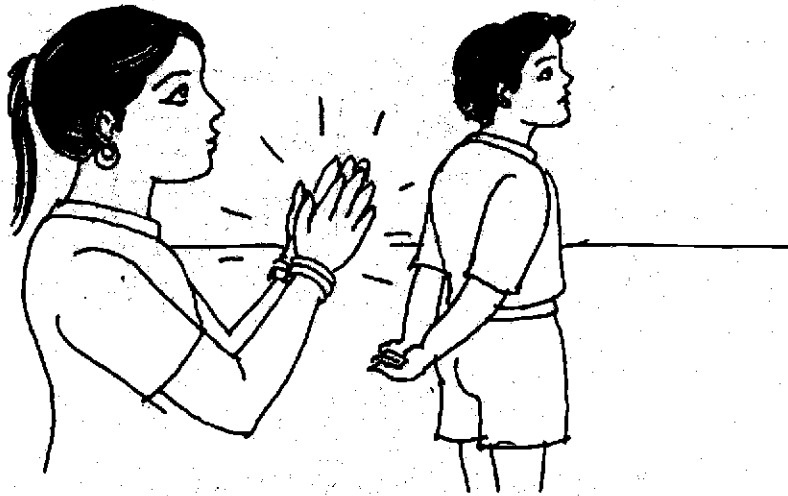
3. He may answer questions irrelevantly.
4. Repetitions of speech may be required before he can follow an instruction.

5. The child keeps the TV/Radio volume too loud.

6. The child does not respond if called from another room.

7. "He hears only when he wants to", is a very common comment by parents and teachers.

8. The child may display poor vocabulary and grammar.

9. He may exhibit voice problems and mispronunciation.

10. May speak too loudly or too softly.

11. May not mix easily with other children of his age.

12. May favor using one of the ears for listening purposes e.g. He always turns his left ear towards the source of sound or speech.
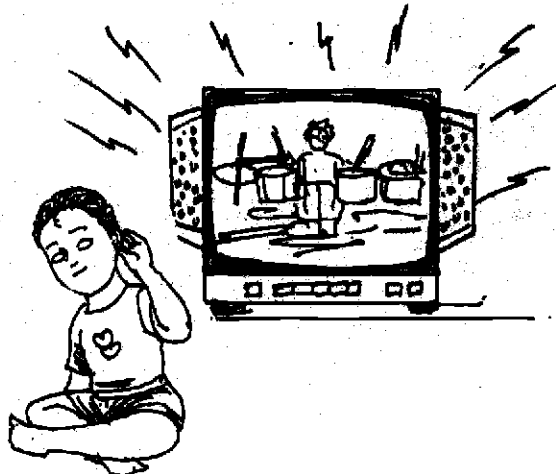
13. Performs better in school if placed in the front row.

14. Uses too many gestures.

If the answer is "yes" to 50 % of the above symptoms, the child may have a hearing problem and he should be sent for formal hearing tests.

Effects Of Varying Degrees Of Hearing Loss On Function, Treatment And Educational Needs

Hearing Level(dB)	Degree of loss	Type	Missed Sounds	Effect
16-25	Slight	Conductive/ Sensori Neural	10% speech signal	Misses fast paced peer interactions, fatigue in listening
26-40	Mild	Conductive/ Sensori Neural	25%-40% speech signal,distant sounds,unvoiced consonants,plurals and tenses	Misses 50% of class discussions,has problems in suppressing background noise.
41-55	Moderate	Conductive/ Sensori Neural	50%-80% speech signal	Articulation deficit, limited vocabulary, learning dysfunction
6-70	Moderately severe	Sensori Neural/ Mixed	100% of speech information	Delayed language syntax,atonal voice,reduced speech intelligibility
71-90	Severe	Sensori Neural/ Mixed	All speech sounds,can hear loud environmental noises	Speech not developed or deteriorates,learning deficits
>90	Profound	Sensori Neural/ Mixed	All speech sounds, feels vibrations	Speech not developed or deteriorates,learning deficits

Why use functional hearing assessment?

1. No special instruments are required.
2. The test can be performed in a short time.
3. Do not require trained professionals to carry out the test.
4. Cost effective techniques.
5. Useful in early identification of hearing loss.

Why not depend only on functional hearing assessment ?

1. These tests do not provide a definite conclusion about the hearing status.
2. These tests do not give any definite diagnosis about the type or degree of hearing loss.
3. False results may be frequently seen.
4. Test-retest reliability varies significantly.

In a country like ours, where people have difficulty in getting access to necessary services, an informal test carries significant importance. If the subject fails in an informal hearing test, he should be referred for formal hearing test.

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3) "Functional hearing Screening"-Deborah Chen-PAVII

4) "Children with Disabilities"-A Medical Primer –Third Edition-

   Mark.L.Batshaw,M.D.,Yvonne M.Perret,M.a.,M.S.W.,L.C.S.W.

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ASSESSMENT OF COMMUNICATION

- Sampada Shevde

In this module you will learn about

- How to assess the current performance level of the child with Deafblindness and Visual Impairment with Additional Disabilities in the area of communication.

- How the child with Deafblindness and Visual Impairment with Additional Disabilities communicates his needs & feelings.

- How the child receives the information.

- How the child uses his Vision, Hearing, Smell & Touch to understand the environment/receive information and to express himself.

- How to assess the child during his day-to-day activities.
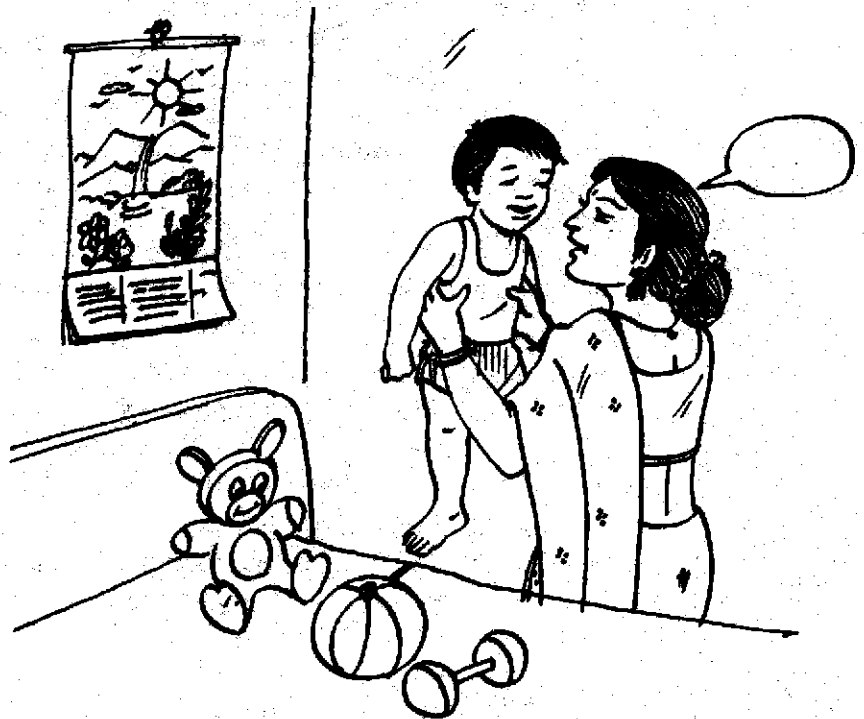
Why do we assess Communication?

We know that children with Deafblindness and Visual Impairment with Additional Disabilities have varying degrees of Vision and Hearing Impairment. Each child is unique and different from one another in terms of learning ability, extent of the sensory impairment and the learning style.

Thus every child with Deafblindness and Visual Impairment with Additional Disabilities has a different way or style of communication. For requesting more food at lunch time, one child may sign for more food, another may touch the vessel of rice, another one may look at the rice and the teacher, another child may pull the vessel, still another one may cry and indicate the need for more food. All of them are communicating the same basic need "more food"; yet at so many different levels of communication.

It is this diversity in expression and in receiving information that makes it necessary for every teacher to know what her student receives; what does he express and how? This is the essence of the Assessment of Communication.

Communication & Language Development happens naturally for all of us. With a young child who has just begun to learn language, his mother always talks to him using very simple language, adding 2-3 new works every time so the child enjoys the conversation, as well as learns new words/language. If his mother uses too many different words, which the child cannot understand, then the child losses interest in the conversation, and there is no learning. It is the same with the child with Deafblindness and Visual Impairment with Additional Disabilities. Through the assessment of communication skills, we come to know the communication skills the child with Deafblindness and Visual Impairment with Additional Disabilities has at present, the different modes or ways he uses to communicate and the different reasons for which he communicates. Thus the assessment of communication becomes important so that we can interact with our students at their level.

However, assessment of communication skills is not a one-time activity. It is an ongoing process. Through everyday teaching-learning situations and interactions, children develop their communication skills and add to their language vocabulary and concepts.

It is equally important for the teacher to assess the child repeatedly, across different activities and to look at assessment as a continuous part of the teaching – learning process, rather than only towards the beginning or towards the end.

How do we assess?

There are different methods for the assessment of communication skills. We will look at the Direct and Indirect Methods of Assessment.

- Direct : This would be through observation of the student when he is working with his teacher/interacting with the caregiver.

Observations could be done in the classroom, outside the classroom, in different activities – a play situation, when the children in a group situation, during lunch time, with different people and at different times of the day during different interactions.
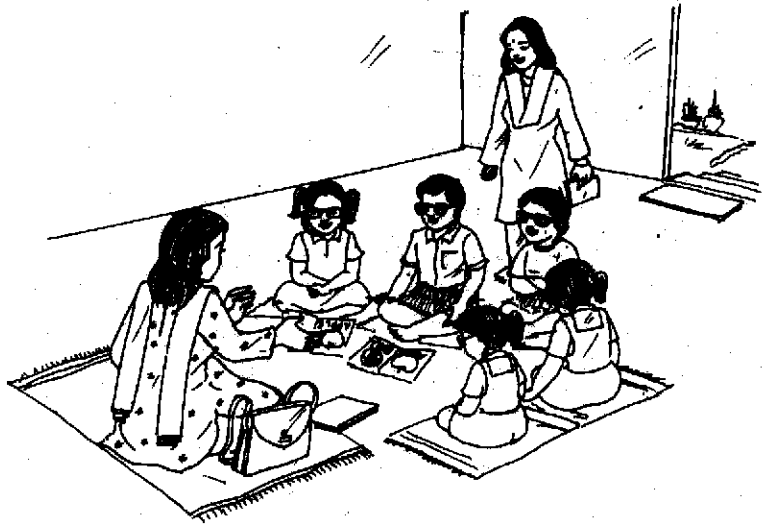
- **Indirect :** Indirect assessment basically consists of gathering information about the child by interacting with people who know the student well on a day-to-day basis.
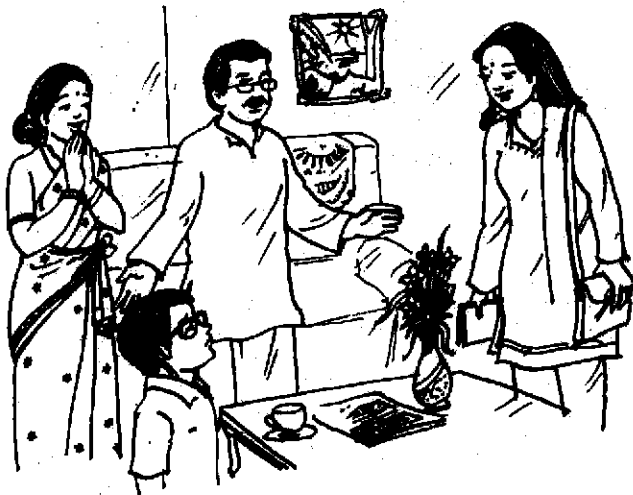
- These would involve the parents, sibling, current & former teachers and any other people who know the student well.

- All of them could provide valuable information about the child's communication skills in different environments.

- Indirect Assessment would also involve reading reports about the student. Reports involving the students medical records, current / previous work plans (educational records) if any, are important as they could provide important information about the child's extent of dual sensory impairment, about the opportunities this student has had and whether he has benefited from them.

What do we assess?

Along with assessing the communication skills of the child, we also need to know how the child makes functional use of his residual senses in order to receive and express information.

A lot of this information can also be obtained from Specialist – Audiologists, Doctors, OT's, etc. However, this information may tell you about the extent of the loss, but probably would not tell you, how the child is actually making use of these residual senses in terms of communication.

VISION

The sense of vision amounts for 75% of the information we receive. Each child depending upon the extent of the visual impairment receives and perceives information in a different manner. That is why we need to know, how our student with Deafblindness and Visual Impairment with Additional Disabilities, is receiving information, how much he is receiving and how he, understands what he receives.

Following are some of the questions we need to answer about the different senses, which will help us to get an idea as to how the child uses his remaining senses to get/give information.

1. At what distance can he receive communication clearly?
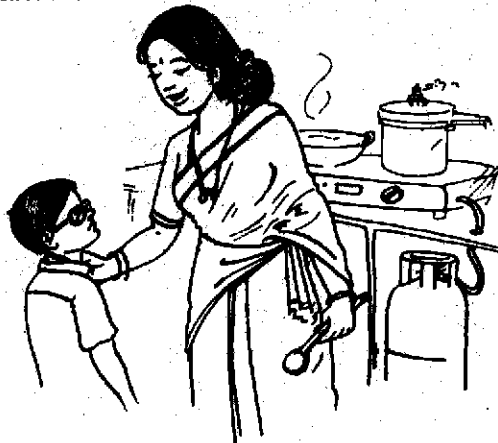
This will help us know, what distance we should maintain, when we are communicating with him.

2. Does lighting affect him? How?

This will give us an indication of whether he sees better in bright light or dim light. Care should be taken to see that the appropriate lighting conditions are maintained in the classroom for him so that he does not have any difficulty in receiving communication.

3. How much detail can he see?

This will help a lot in the selection of teaching material or aids. For e.g. If the child cannot see much detail then it always helps to select pictures that are simple to comprehend, and do not include many details.

4. At what pace can he follow movement?

This will help the teacher to modify her pace when she uses sign language with the child when she communicates with him.

5. Does he visually track people as they move around?

Tracking people as they move around in the environment, or tracking skill is important, as it will help the child during reading and writing.

6. Does he have good visual attention?
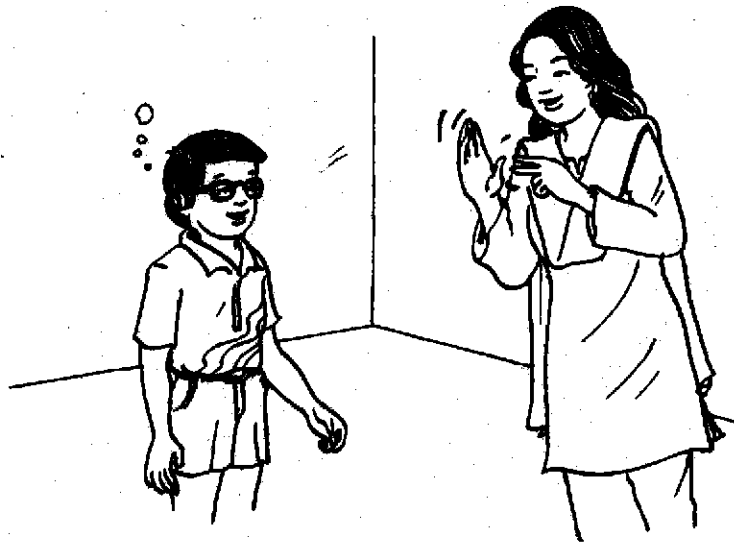
Visual Attention is important for receiving information. If a child has good attention skills it helps him to receive more information. If the child's visual attention skills are poor, then he might get easily distracted. As a result, he will receive less information.

Observe the child in a communication interaction with the teacher, or when he is involved in an activity with the teacher in the classroom and outside the classroom.

- Observe if he pays attention when the teacher communicates with him.

- Is he able to follow the teacher's movements as she is interacting with him? Does he follow her if she moves about, or does he look when she is introducing a different object?

- Is he able to follow the teacher if she leaves him for bringing something? Does he notice if someone else comes in the room at that time?

- How long does he want to continue with the activity/how long is he interested?

- When the teacher interacts with the child, at what distance does he respond to her? Does she have to go very close to his face and does he respond only then?

HEARING

Along with vision, hearing is also an important sense, in terms of receiving information. We need to know how the child is using this sense and whether he can be assisted through proper hearing aids to make better use of his residual hearing, so that it could become a channel a for communication.

1. How loud does the sound have to be for the child to respond?

2. How does the child respond? Does he startle, blink, cry, become tense or change his breathing pattern to sound? What type of sounds lead to these responses?
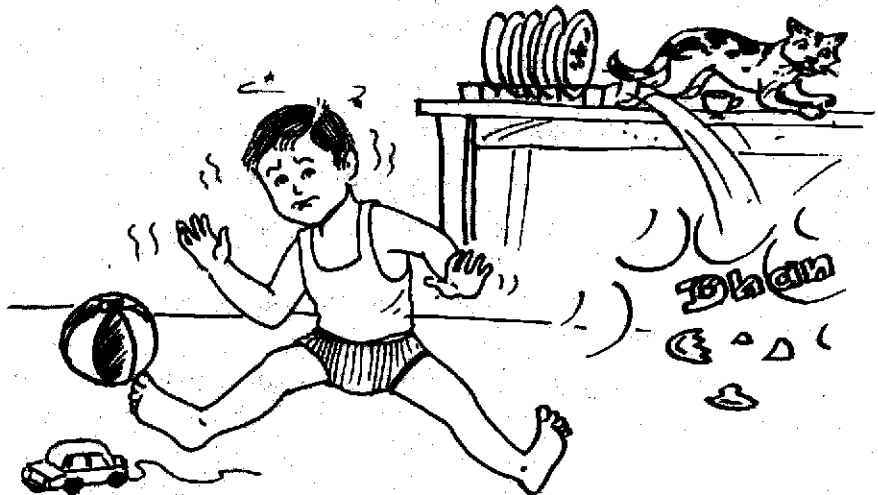
3. Does the child attend to sound?

● You might see some change in the child's behavior. Look to see if he stops what he is doing, appears to search for the sound, cries, smiles, and laughs or suddenly becomes tense in order to listen.

4. Does he respond to and understand simple commands? Give examples.

5. Do you have to raise your voice during classroom activities and conversation? Explain.

6. Does the child respond to her name? Does she respond to routine everyday questions like "do you want ball"?

7. Does he produce any oral utterances, which indicate certain needs or for the purpose of self-stimulation?

8. Does he imitate sounds? Which sounds are these?

9. Does he make some sounds? Which sounds are these?

10. Is he easily distracted by background environmental sounds?

● Observe the child carefully to see if he is aware of / attends to environmental sounds – water, bell ringing, etc. Look for any reactions to these sounds.

a. You could also use different objects such as bowls, plates, spoons, glasses etc to make sounds, varying the loudness, to see how the child responds to them. Make sure that the objects are not in the visual field of the child, so we can be sure that he is responding using the source of hearing and not vision.

b. Using the drum, rattle and other musical instruments would also help.

c. When you talk to him, observe how loudly / softly you need to speak for him to respond.

d. Is he frightened by certain sounds? Which sounds are these?

e. Does he/can he imitate certain sound patterns, either through vocalizing or through physical movements (hands)?

TOUCH, TASTE, SMELL

It is important to know how the child uses his sense of taste, touch and smell as well.

Touch is an important sense, as it provides access to information and to the surrounding environment. For a child with Deafblindness, most of the communication is also through touch.

Thus we need to know how well the child is using these senses and whether he is using them as a source of information.

1. Does he reach out touch things?
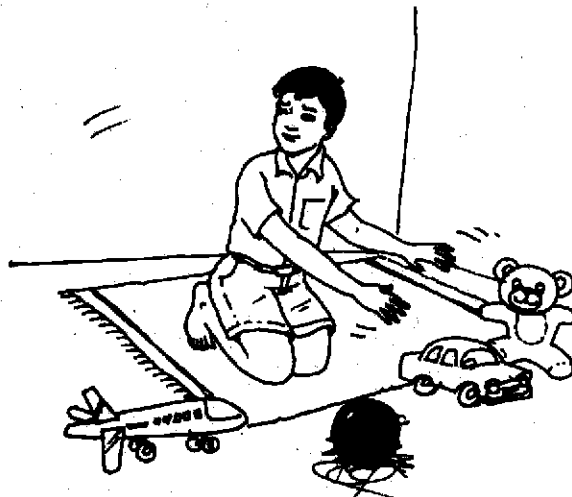
2.   Is he interested in different textures?

3.   Does he recognize objects

4.   Does he follow your hands to see what you are doing?

5.   Does he understand he can get help from other people in a tactile way?

6.   Does he mouth objects? Why?

7.   Does he recognize people by their smell?

8.   How does he react to being touched?

a.   Observe the child when he is in an unfamiliar environment to see if he tries to explore his immediate surrounding. Also observe how and if he explores in a familiar environment.

b. When he is shown a new object does he try to explore/manipulate it using his hands/use smell/taste?

c. Can he identify familiar objects e.g. brush, plate, glass, etc. through touch? Can he make out the difference in these familiar objects through touch?

d. Does he always put objects in the mouth or touch them with his lips? Does he do it for self – stimulation or to get information about the objects? What textures does he put in the mouth?

e. Does he like to touch different textures? Are there any textures he dislikes?

f. When he wants something, does he touch someone to let him or her know? How does he react when someone touches him? Does he startle? Is he afraid? Does he become tense or smile? Does he recognize the person through touch/smell?

MOTOR SKILLS

Assessing the level of motor skills is important as most of the communication modes require the use of motor movements – e.g., using sign language, pointing to the objects, giving objects to someone, etc. It is essential to know well the child uses his motor skills or what are the problems present, so that the people working with the child can decide an alternative technique or system.

1. Does he have any fine motor difficulties so as to affect the use of signing?

2. Is he able to hold his eyes, head, body and hands steady in an appropriate position to receive communication?

a. Observe the child in different activities such as sand play, water play, group play, cooking, etc and see how the child uses his hands during the activity. Does he seem to have any problems, with using his fingers during the activity? Does he use the full hand or his palms more than the fingers?

b.   When he is interacting or receiving information does he have any difficulties in maintaining head or neck control, or any difficulties keeping the hands steady during the activity?

PERCEPTION

As we saw earlier, every child receives and perceives information in a different way. Even though we know that two students can see the same red apple, we cannot imagine, whether they perceive it in the same way.

Imitation of body movements is important because eventually if the child is going to use sign language, he will need to see the sign done by the other person, interpret it and then repeat it. If there were problems in perception, it would be difficult for the child to pick up sign language.

Check, whether

1.   He can imitate body movements/hand movements

2.   He can match simple objects or designs

PRESENT COMMUNICATION SKILLS

We also need to assess what is the child's current level of communication skills. How does the child communicate? What does he communicate? When and with how may **people** does she communicate? All these things form a crucial part of knowing the present communication skills of the child.

All this information will help us get an idea about interacting with the child at his/her level.

Forms of Communication used :

Form refers to how the child is communicating. Children with Deafblindness communicate in a variety of ways

For example if a child wants to communicate that he is hungry, he may do so in different ways. He might use:

● **Facial Expression** – the child might cry to indicate that he is feeling hungry.

● **Pointing** – The child might point towards the stomach, mouth or towards his plate kept in the corner

● **Sign language** – He might use the sign for "hungry"

● **Using objects** – He might pick up the plate he uses to eat food to indicate that he is hungry

● **Using pictures** – He might show the teacher the picture that represents lunch time to indicate that he wants food

- **Vocalizations** – He might use a particular sound or vocalization to indicate that he is feeling hungry.

- **Speech** – He might use a particular word or say food to indicate that he is hungry

The forms could be as obvious as touching an object and giving it to the teacher, to indicate that the child wants more of it, or could be very subtle, as the child keeping his body still in order to indicate that he does not like the activity (rejection). Good observation skills are important to know the different forms of communication used by the children.

Some **examples** of Forms of Communication are :

- Pushing away the plate of food.
- Throwing the plate of food away.
- Crying when asked to touch the plate.
- Head banging
- Hitting himself.
- Throwing the mat away from the table.
- Signing "Finished".
- Moving back from the table, etc.

All these forms indicate that the child doesn't want more food, or wants to be finished with the activity. Most of them are behaviours shown by the child to communicate something. There are certain questions you could answer, when you observe, which would help you in identifying the forms.

1. Does he use his voice?
2. What kind and variety of sounds does he make?
3. What is his primary mode of communicating?
4. Does he use different kinds of vocalizations?
5. Does he use body language and facial expressions? How?
6. Does he use natural gestures?
7. Does he point to obtain things?
8. Are there some forms, which are not used with the intention of communication?

E.g. Child may be producing certain sounds/vocalizations, but they may not be with the intention of communication. Child may just be doing it for the purpose of self – stimulation.

a. Observe the child in different activities such as feeding, play activity, group situation, outside school, in the classroom, in the hostel/

home {if possible}, with the teacher, caregiver and some other people who interact with the child.

b.   Note down the different behaviours that you observe child doing, which you think have a communicative purpose. During the activity observe what does the child do? How does he express himself during the activity/interaction? Does he sign, use gestures, point, use his voice, use his eyes to point or express? Note down all these behaviours, and any others you feel are done with the intention/ purpose of telling something, or expressing a need.

Why do we communicate? (Functions)

Whenever the child communicates there is a reason/purpose for the communication. This is what we mean by the function.

Children communicate for different reasons, such as:

Refusal or rejection : A child may want to show that he is refusing a particular toy or food item, etc.

Indicating a choice : He might want to indicate his preference for a particular item

Continuation of an activity : He might want to indicate that he wants more of an activity. If he is sitting on a swing and likes it and wants the activity to continue, then he will communicate to let the other person know that he wants more of this particular activity.

For giving information : He might want to talk to other people, in terms of giving them information.

The trainees will be given a list of the different reasons for communication.

Why does the child do a particular behaviour? What does he gain from it? This is the purpose of communication (the function).

In the previous example – at lunch, the function is "refusal/rejection". The child is showing those behaviours because he wants to communicate that he doesn't want to eat. This is the function.

One form could also have more than one function. Like in this example, head banging could mean "refusal" as well as it could indicate "pain". May be the child has a headache; may be does not like that particular vegetable and wants to eat something else. Through proper and repeated observation, you can gradually specify the function of the behaviour.

Certain questions, which would help you get more information about functions are:

1.   Is the behaviour done to get the other person's attention?

2. Is the voice / vocalizations used to get the other person's attention or for self-stimulation?

3. Are there different types of vocalizations, which indicate different feelings / needs?

4. Is the communication done for problem solving?

For example, a child is going outside the classroom for a play activity, and needs to put on shoes. He can not do it independently and needs help.

What does he do in such a situation? Does he reach out and touch someone to indicate that he needs help in wearing shoes? In this case his communication would be with the intention of solving a problem. Are such behaviours present?

Or

Would the child go to someone whom he knows will help him out in this situation?

Note any such behaviours if they are present.

5. What are the different functions for which he communicates?

CONTEXT OF COMMUNICATION

This implies the location / place where the behaviour occurs. For the example of lunchtime, the context is the dining room, if the child eats there.

This helps us know if the behaviour happens in only one particular place or it is happening throughout the day.

It would also help to note down the **people** with whom the behaviour occurs. The child may be very comfortable with some people and less comfortable with some others. He would communicate more with the teachers/people with whom he is very comfortable. You would probably note more forms of communication with the person he is comfortable with, rather than with other people.

The level of comfort that the child has with the person he is working with is very important. You will possibly see more variety of the forms with the person the child likes / is comfortable with.

Also note down with **how many** people he communicates with.

CONTENT OF COMMUNICATION

By content we mean, what is the child trying to say?

When the child refuses to eat food by pushing the plate away, the content could be "I don't want to eat rice/lunch".

In addition to getting an idea about the level of communication skills on the basis of form, function, context and content, certain additional questions, which will help you to gather more information, are:

1. What is his receptive vocabulary?

2. What is his expressive vocabulary?

3. Is there grammatical structure in the language used?

4. Is he using one word / combing two?

5. Is his communication clearly understood by all people communicating with him/is it used only by his teacher?

6. Does he always communicate to a person or sometimes he would communicate, even when nobody is around?

7. On what topics does the teacher talk to him? Is it always related to the work he is doing or do they have a conversation about other things as well?

8. Why do people around him communicate with him?

9. How do people around react/respond when he communicates?

10. Are opportunities for making choices available? What kind of choices are they?

11. Do the people communicate with him have good communication skills?

12. Which are some of the communication skills, you think this child can learn?

Things to remember

1. Give the child enough time to respond.

2. Observe the child carefully to see how he is already letting you know what he wants. He may be using a combination of sounds / vocalizations, crying, laughing, smiling, reaching, pointing, picking cup, throwing objects or using more formal types of communication, such as speaking or using sign language.

3. If the child is not easily able to express his choice, provide other ways to let the child know what the options are, such as allowing him to touch or taste objects of his choice.

4. Allow the child plenty of time to express his preference.

5. Remember that the assessment of communication needs to be done through a variety of activities, in different environments and by assessing the child's interaction with a variety of communication partners.

6. Always look for alternate methods/ways of communication by the child.

7. When selecting the activities, keep in mind, the child's interest, age and ability.

8. Remember, communication assessment cannot be done in a single day/session. You could gather more and better information if more than 1 person observes the same child.

9. Objects chosen could be attractive in terms of colour, texture, sound, etc.

10. Assessment is to be done by observing the child in a variety of activities, in different environment, and with different people.

APPLICATION QUESTIONS

1. How will you use the information gathered from assessment in the child's day to day functioning activities, like feeding, bathing, etc?

2. How will this information help you interact with the child at his/her level?

ACTIVITIES FOR TRAINING

1. Select one of your student behaviours to detect if it reflects a communicative intent. Analyze the behaviour in terms of form, function, content and context.

2. View the videotape of a child. Can you identify the communicative intent of different behaviours?

3. Develop your student / child's communication profile.

4. Observe a real life activity – gardening, cooking, etc. Describe how you would include communication in the activity.

5. Assess a conversation. Was there turn – taking? Was the topic appropriate? Was there trust?

References :

1. Hand in hand, Vol. I Essentials of communication and mobility for students who are DeafBlind, by Kathleen Huebner, Jeanne Pricket and Elga Therese, SKI – HI INSTITUTE, 1995

2. **Remarkable Conversations** : A Guide to developing meaningful *communication with education & young adults who are DeafBlind*, Barbara Miles & Marianne Riggio, Perkins School for the Blind, 1999.

3.   Augmentative Communication for the children & young adults with severe speech disorders: Their manner of speaking Anne Wanick & Sudha Kaul Indian Institute for Cerebral Palsy Calcutta 1997

4.   A Communication Guide to Communication with DeafBlind Persons, Linda Kates & Jerome D. S., New York University. School of Education, 1980.

- Namita Jacob

In this section, you will learn

- Why we do ecological assessment
- How to conduct an ecological assessment
- How to identify functional activities for each child
- How to conduct a discrepancy analysis to form the basis of planning instruction

What is an ecological assessment?

Ecological assessments pay attention to the role of the environment in the learning and performance of an individual. A bumpy road, the height of the cupboard where materials are kept, the speed of a conversation are some things that can lead a child to be dependent on others for help. Simple environmental adaptations or teaching the child skills specific to that environment can dramatically increase the child's capacity for independent functioning.

An ecological assessment comprises several steps that guide the teacher towards creating goals for students in response to a specific goal or problem or creating an entire educational plan for a child. An example of a specific goal is increasing a child's participation in conversations when he plays with his peers in the evening. In this case, the environment includes the physical space where the activity is taking place as well as the people who are involved in the activity.

Creating entire educational plans for students can also be done using ecological assessments. This is usually undertaken when children belong to communities or live in areas where skills and learning that are useful and valued are very different from those in a regular curriculum. For example, being able to watch goats, clean fish or mend baskets may be skills specifically useful in certain villages or communities in India. Respectful behaviour to elders, and typical tasks of young boys and girls often vary from community to community. An ecological assessment will take typical expectations. People in a specific community hold for their children and use this as the basis for future planning for the child with a disability. Since the determination of activities within the ecological curriculum is made based on what other children in the same household or community would be expected to do at that age, the individual is able to function as independently and in as normative a manner as possible within his own environments.

Planning based on ecological assessments results in the development of skills that are ecologically valid for that student within specific geographic, cultural, social, and economic environments. This is particularly relevant in India with our culturally and economically diverse populations.

Why do we need to use ecological assessments?

Assessments give us direction when setting goals for children with disabilities, guiding us in selecting activities and skills that will be the focus of our teaching. Selecting appropriate assessment tools is therefore important as they directly impact the way we plan for and teach our students.

Norm-referenced scales are often used with children with disabilities, comparing a child's performance with that of a normative or comparable group. However, children with visual impairments and additional disabilities and children with deafblindness represent a highly heterogeneous group with a wide variety of needs and abilities making the construction of norm-referenced scales challenging and the utility of comparing one child against an "average" score questionable, had such a scale existed in India.

Further, when a child is functioning significantly below the level of other children of the same age, developmental assessments have little usefulness in setting goals that are functional and age appropriate. Ecological assessment considers each child in the context of his environment and typical functions within those environments, leading to the selection of tasks and skills that are immediately relevant to that child. The major goal of an ecological assessment is the selection of goals that increases the child's control, participation, and interaction in natural social and physical environments.

What makes a goal functional or ecologically relevant?

The selection of a goal or a teaching activity should be grounded in a good understanding of the current and potential future contexts of the child's life. Here are some ways of checking whether the activity or task you have selected is relevant:

It increases the child's independence in caring for self

It increases the child's opportunities for participation with peers

It increases the child's involvement in the world (places & people)

It allows the child to access desired experiences (leisure, play)

Goal importance rating scale

Rate the importance of each task by judging its contribution to the following areas:

Characteristic of task	Contribution to characteristic			
	None	Low	Medium	High
Increases independence in self care				
Increases social acceptability				
Helps express feelings and thoughts				
More chances to interact with people				
Chance to engage in enjoyed activity				
Improves health, hygiene and safety				
Participates in social relevant activity				
Task occurs frequently in routine				

The tasks are not listed in hierarchical order, the basic assumption being that their importance is to be considered in the context of the child and his social, physical and economic environment.

Source: adapted from Baine (1991), *Handicapped children in developing countries : Assessment, curriculum and instruction.* Pg 45.

Definitions of terms used in ecological assessments

Domain: A general broad classification or category that reflects meaningful aspects of life. (eg. recreation, work)

Environments: A general label for settings in which activities occur (e.g. School, temple)

Sub-environments: Refer to specific sites within the environments. (e.g. a particular school or temple)

Activity: A behaviour or sequence of behaviours that are performed within a sub-environment. (e.g.: going out for a meal)

Skills: Specific tasks or steps performed within the activity (e.g.: scan room, locate empty table, locate chair, scan menu, choose food/drink and so on)

What are the steps in an ecological assessment?

An ecological assessment involves six major steps if it is to be used to create an individual plan for a child. If it is being used to help solve a specific problem or meet a particular goal (for example, increasing independence at work), then you can start from the second step.

1. The first step is to identify the major curriculum domains.

There are many different ways in which to divide the curriculum, but for the purposes of this discussion, we will use the following divisions.

Independent living activities: Includes caring for self and one's own things and activities such as bathing, selecting clothes, dressing, washing clothes, ironing, and so on. This area also includes those skills that are directly relevant to the care of aids and appliances that the child may use and health and safety issues that may arise as a result of the impairment.

Work: For a young child, work includes those things that they would be expected to do that help the family. This could include shopping or cleaning the house or a room. As the child grows older, this area consists of those activities that are carried out to contribute to the individual's or family's income.

Recreation/leisure: Refers to any activity the individual may engage in for enjoyment and ranges from reading to walking outdoors. For a young child, this area includes friendships and play and the ability to access common play areas such as parks, the beach or the neighbour's house.

Community: This is often treated as a separate domain although accessing and participating in the community should be a part of each of the other areas. However, since this area is often overlooked, activities that are socially relevant such as going to the temple, participating in harvesting, weddings and funerals are all included here.

Education: Academic learning is included as an important part of a child's life and can be carried out in formal settings such as school as well as in the context of daily activities within the home and community.

2. The second step is to create an ecological inventory:

Identify the least restrictive environments in which the student may be involved within each domain in the following manner. Within the same family or community, find out what other children the same age and gender are expected to do. How and where do other children of the same age and gender spend their days? What activities do other children of the same age and gender engage in? These questions will help you list the environments, sub-environments and activities that children typically engage in. Talking to older children will help you anticipate what the child may need to know in the future. Based on parent interviews, identify the routine of the child and the family and those activities that the family identifies as important. Identify environments, activities and skills that are related to the presence of the impairment and are necessary for the child's independence (for example, the maintenance of a hearing aid or glasses; doctor visits and medical

procedures). Remember that an activity typically comprises of several steps – for example, buying milk every morning is an activity that comprises of the following main steps: taking the money and basket, going to the shop, buying the milk, returning home, placing the milk in the kitchen and putting away the basket.

Rate the relative importance of the activities you have listed and determine which ones you will focus on.

If you are using the ecological assessment to solve a specific problem or meet a particular goal, you already know the environment and activity you want to focus on. Pay attention to how other children access those environments and remember to list *all* the environments and steps of the task that are involved.

3. The third step is to conduct a student repertoire inventory

Identify and list the skills performed by a non-handicapped peer for the selected activities. This will be discussed in detail a little later.

4. The fourth step involves a discrepancy analysis.

In this step, we find out what skills the child can already perform. If the child is unable to perform a skill, then observe and analyze the skill, identifying the specific aspects of the skill with which the student has difficulty.

5. The fifth step requires you to establish priorities for skills training.

The same form we used to determine the importance of activities can be used at this stage too. Here we must determine whether we will teach the child the skill or develop adaptations so that the child can be taught to perform the skill with the adaptation.

6. The final step is to design an instructional program.

In this step, you determine the specific adaptations and methods of training that you will use.

Identifying the curriculum domains, listing the activities that occur within the sub-environments and identifying the range of environments and sub-environments within each domain, are considered part of the planning process. Careful analysis and a clear understanding of the child's natural environment is very important as it will form the basis of the individual's curriculum. The identification of specific skills that the child needs is the actual assessment and involves using two tools – the student repertoire analysis and the discrepancy analysis discussed below. Based on the information obtained, you can design your curriculum and specific instructional goals and objectives.

Activity: Get into pairs. One person describes a child that you are currently serving including his skills, family and community. That person will be the proxy for the child's family. Brainstorm together to list the kinds of activities that may be relevant in the context of each domain. Identify current activities, those that will be important in 4 to 5 years and those than will be relevant in 10 to 12 years. List the sub-environments and environments in which they occur. Individually and then together, rate and select the most important activities for this child.

Steps in ecological assessment:

1. Identify domains
2. Identify environments within each domain
3. Identify current and future sub-environments
4. List activities in each sub-environment
5. Prioritize skills needed in order to engage in activities
6. Design instructional programs

How do we determine what is to be taught?

You have now completed your planning phase – that is, you know broadly what areas of knowledge and competence the child will be working toward. Now you have to determine more specifically what you will be teaching. In order to do this, select an activity and watch a typically developing peer perform it. Note the major steps in carrying out the activity and the specific skills that are necessary to be able to do each step. Remember you do not need to carry out a detailed task analysis, but instead capture the main steps and skills involved in an activity. When listing skills, isolate "teachable units" so that they are directly relevant to teaching goals.

The final step is to determine instructional options. Remember that we can choose to teach the child a particular skill such as identification of numbers or we can choose to adapt the activity and teach him to function independently within the new requirements of the task. For example, we can count out the exact amount of money and have him locate and take it safely with him to the shop. Determination of what skills to teach and what tasks to modify require that you take into consideration many of the same issues that you did when you selected the activities.

Group Activity: The group suggests instructional options for the child.

Final Activity: Back in your pairs, select one activity and complete a student repertoire inventory and discrepancy analysis.

Things to remember

- Ecological assessments lead to the development of curricula that are referenced to the unique needs and lifestyle of the child, family, and community.

- It allows for planning of instruction that can be implemented naturally in the daily routines of the family and child.

- It emphasizes skills that are functional now and in the future.

- In order to function in the community, students must perform clusters of related skills together in the natural environment.

- The main steps of an ecological assessment involves:

- Listing main curriculum domain areas

- Identifying current environments and future environments for the student by studying those accessed by peers in the same family or community

- Identifying skills that are important for full participation in each of these environments

- Identifying essential clusters of behaviours a student will be required to perform in each sub-environment.

- Identifying teachable skills required to perform each activity

Using what you learnt

1. Use a developmental checklist and an ecological checklist to set goals for a child. What is the difference in the goals you have selected? What has been lost and what has been gained by using each scale?

2. Carry out an ecological assessment for a specific situation such as increasing participation in family routines or increasing initiations in conversation with peers.

Selected reading

Baine, David. (1991). *Handicapped children in developing countries: Assessment, curriculum and instruction.* Edmonton, AB: Vector/ Educational Psychology, University of Alberta.

De Jong, Coen; Raemaekers, Marlies; & Zambone, Alana. (2002). *Learning by doing together. A functional curriculum approach for children and youth with multiple impairments.* Bartimeus-ICEVI Publication

Noonan & McCormick (1993). *Early intervention in natural environments. Methods and procedures.* California: Wadsworth Inc.

Snell, M. (Ed.) (1987). *Systematic instruction of persons with severe handicaps.* Columbus: Charles E. Merrill Publishing Company.

Student repertoire inventory & discrepancy analysis

Student: _____ Domain: _____ Activity: _____

Environment: _____ Sub-Environment(s): _____

Activity steps	Inventory of peer		Student inventory	Discrepancy analysis	Instructional options
	Specific skills				

Additional comments:

+: independent   +/-: emerging   -: not independent

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- Jayanthi Narayan

The Department of Special Education of National Institute for the Mentally Handicapped, under the project on development of service models for children with mental retardation and multi sensory impairments has developed a simple screening checklist. Every child has a right to education and that includes children with mental retardation and additional disabilities. As discussed earlier, there are no special educational provisions for children who have more than one disability in the country. To bridge the gap, the NIMH has taken up the project leading to development of service models for low incidence conditions. A screening checklist is one of the outcomes of the project.

Screening Checklist:

The checklist contains provision for collecting basic information about the student and statements in simple observable language indicating probable sensory impairment. This would enable a parent, a teacher or any one who works with a person with mental retardation to screen easily for suspected visual, hearing difficulty and related behavioural characteristics. In other words this will help in shortlisting children who should undergo detailed assessment for suspected sensory loss.

Reliability and validity:

Relaibility and validity have been established for the checklist. The test – retest reliability was found to be 0.86 (p < 0.01).

Face validity has been established by giving it to experts in the field and is found to be having high validity. The checklist is attached in the following page. This tool is not a diagnostic tool but it will help in screening for further referral for assessment and diagnosis by audiologist and opthalmologist.

How to use:

The user will have to simply fill in the information in sections 1,2 and 3. In section 4, whichever item is found positive for the child being screened should be ticked in the space given along the margin. In section 5 details of prior diagnosis if any should be noted down. Section 6 can have information that may be important but could not be fitted in the earlier sections. This will help the teacher, parent or any other assessor to make decisions on further referral.

This checklist was found necessary because many children with mental retardation and sensory impairment especially if it is low vision or moderate hearing loss, go unnoticed in schools for children with mental retardation. Their behaviour is attributed to mental retardation rather than the sensory loss. This checklist may identify the specific problems which can be remediated by the respective professional and the teacher can be given the support by them with regard to classroom management. A child with suspected hearing loss should be referred to an audiologist while the one with suspected visual impairment should be referred to an apthalmologist.

Screening checklist for sensory impairments

1.0 Basic Information
1.1 Name :   1.2 Regn. No. :
1.3 Age / Gender :   1.4 Date   :
1.5 Parent / Guardian's Name :
1.6 Address :
1.7 Phone / e-mail :

2.0 Presenting Complaints
2.1 Informant :
2.2 Complaints :

3.0 Details of previous consultations / treatment
3.1 Nature of consultation :
3.2 Advice / referral :
3.3 Followed / not followed
     (details)

4.0 Tick at the space before the statements that best describe your child / student.

4.1 Vision
4.1.01 _____ Does not reach for bright objects when shown in front of him at
              1-2 feet distance.
4.1.02 _____ Does not respond to sounds / calling, verbally or by turning head towards
              the sound / stopping an activity he is involved / such other responses.
4.1.03 _____ Seems to reach for object when shown along with verbal instruction.
4.1.04 _____ Gropes for locating objects that are on the floor.
4.1.05 _____ Bumps into objects and furniture while moving about.
4.1.06 _____ Does not locate specific object in plain / contrast back ground.
4.1.07 _____ Does not locate specific object in crowded back ground.
4.1.08 _____ Locates objects but not in pictures—plain back ground.
4.1.09 _____ Locates objects but not in pictures—crowded back ground.
4.1.10 _____ Holds objects too close to face to explore.
4.1.11 _____ Holds head in an angle to focus.
4.1.12 _____ Does not seem to have any vision at all.
4.1.13 _____ Any other.

4.2 Hearing

4.2.01 _____ Does not startle when she/he hears loud sounds.
4.2.02 _____ Sometimes seems to respond to sound and sometimes does not.
4.2.03 _____ Does not locate the source of sound.
4.2.04 _____ Does not respond to his name when called from behind.
4.2.05 _____ Does not recognize voice of mother / other family members.
4.2.06 _____ Does not respond when called from another room.
4.2.07 _____ Responds only after a few repetitions.
4.2.08 _____ Does not respond to soft sounds. Eg ; sound of a coin, payal bells ect.
4.2.09 _____ Seems to favor one ear more than the other for listening purposes.
4.2.10 _____ Seems to lip read.
4.2.11 _____ Does not seem to differentiate between various sounds.
             [Eg. Sound of a rattle, drum or squeaky toy / sound of a bell]
4.2.12 _____ Child complains often about ear pain.
4.2.13 _____ Ear discharge present any time, if so since when.
4.2.14 _____ Any other.

4.3 Behaviour

4.3.01 _____ Walks slowly with 'bent forward gait'.
4.3.02 _____ Does not seem to understand what is told / does not follow verbal
             instructions.
4.3.03 _____ Has self stimulating behaviour like body rocking, playing with
             fingers. [specify].
4.3.04 _____ Clumsy in carrying out activities like self feeding, dressing etc.
4.3.05 _____ Does not seem to be affected by loud sounds / noise and
             continues with activities.
4.3.06 _____ Uses more gestures than words to express self.
4.3.07 _____ Does not speak at all.
4.3.08 _____ Says a few words, lacks clarity.
4.3.09 _____ Needs repeated instructions.
4.3.10 _____ Needs repeated demonstrations.
4.3.11 _____ Does not show interest [not motivated] to learn new skills.
4.3.12 _____ Any other.

5.0. Does he have any physical / motor disability ? Describe.
[write if you know diagnosis or the condition].

6.0 Any other.

COMMUNICATION

Meena Nikam

In this module you will learn about :

- What is communication
- How communication develops in the nondisabled
- How deafblindness and disabilities affect development of communication

What is Communication ?

"Communication is a bridge". Communication is our basic need because man is a social animal. We all communicate throughout the day with one another.
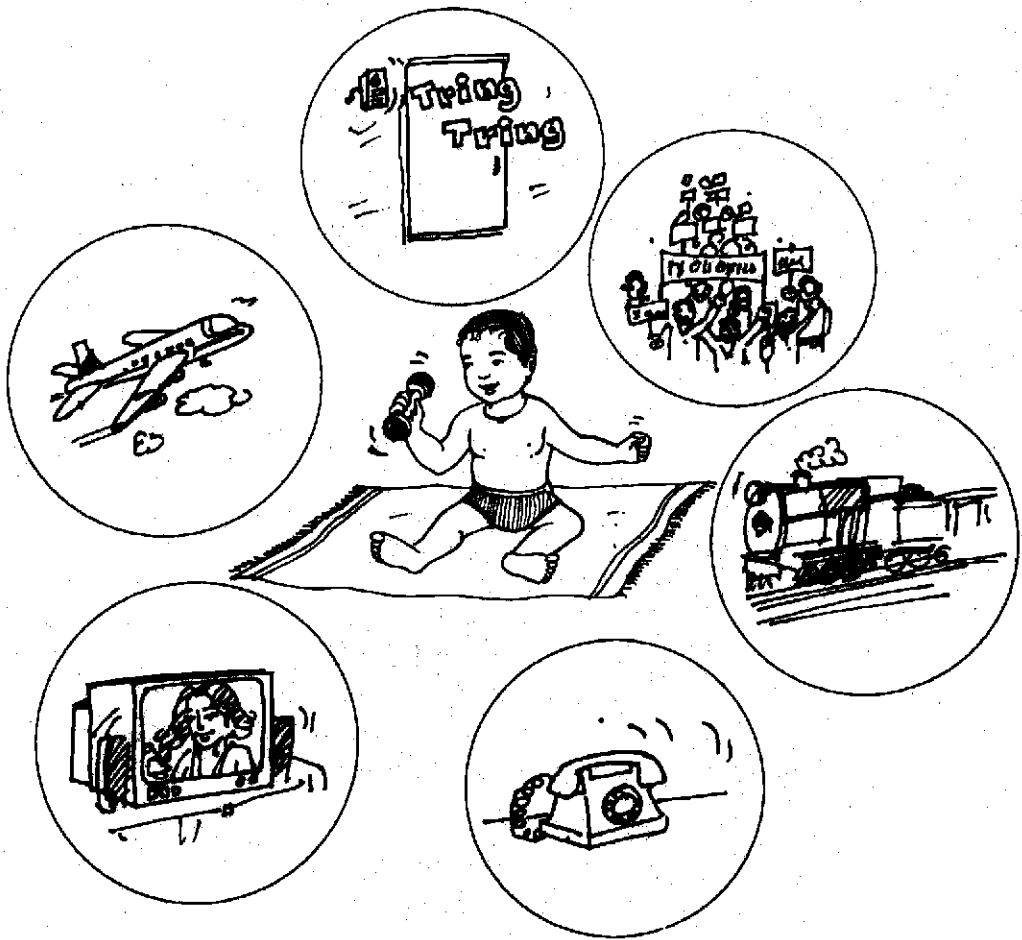
Communication links us with environment around us. It is a means by which we get connected with environment around us. In simple words, we can say that 'communication is connection'. Without the ability to communicate, to send and receive the messages, we would remain isolated and would be unable to control the environment around us.

Communication can be defined as the **"Process of transmitting thoughts, ideas, information and messages from one person to another"**. Communication develops through social process. We communicate with one another in many different ways. Our senses are principal channels for this process, i.e. vision, smell, touch and sound. These channels give us the information about the environment around us and we can send messages through these senses. The sound of slammed door, banging of pans in kitchen, humming, giggling, frowning can tell us many things about people around us without use of words. In short, communication does not mean spoken language only. It includes variety of ways by which a person gets connected with other people.

By considering the above definition, we get some basic elements of communication.

- Communication is a process. It exists as a flow. A series of steps are involved in communication, which include generation of ideas or messages, putting those ideas in logical sequence and transmitting them through some media. At the other end somebody receives that idea or message and understands it. He may act upon the message received.

$$\text{Sender} \xleftrightarrow{\text{message}} \text{receiver}$$

$$\text{Receiver} \xleftrightarrow{\text{message}} \text{sender}$$

- Communication involves transmitting information and understanding. Eg. If a person is communicating with a child who has no hearing or sight, he will be unable to understand the message and act upon it. That means effective communication is always a two-way interaction. Communication has a back and forth pattern. Speaker sends the message and receiver responds to speaker. For the continuation of communication, information must not only be transmitted and received but also understood.

- There must be some channel or medium through which information and understanding could be transmitted.

- Communication can be done by verbal or non-verbal media, i.e. spoken language, written material, gestures, pictures, or signs.

MODES OF COMMUNICATION

SMELL

HEARING

TOUCH

SEEING

TASTE

RECEPTIVE ASPECTS

PICTURES

MODES OF COMMUNICATION

READING

EXPRESSIVE ASPECTS

DRAMA & MIME

SPEECH

WRITING

GESTURES
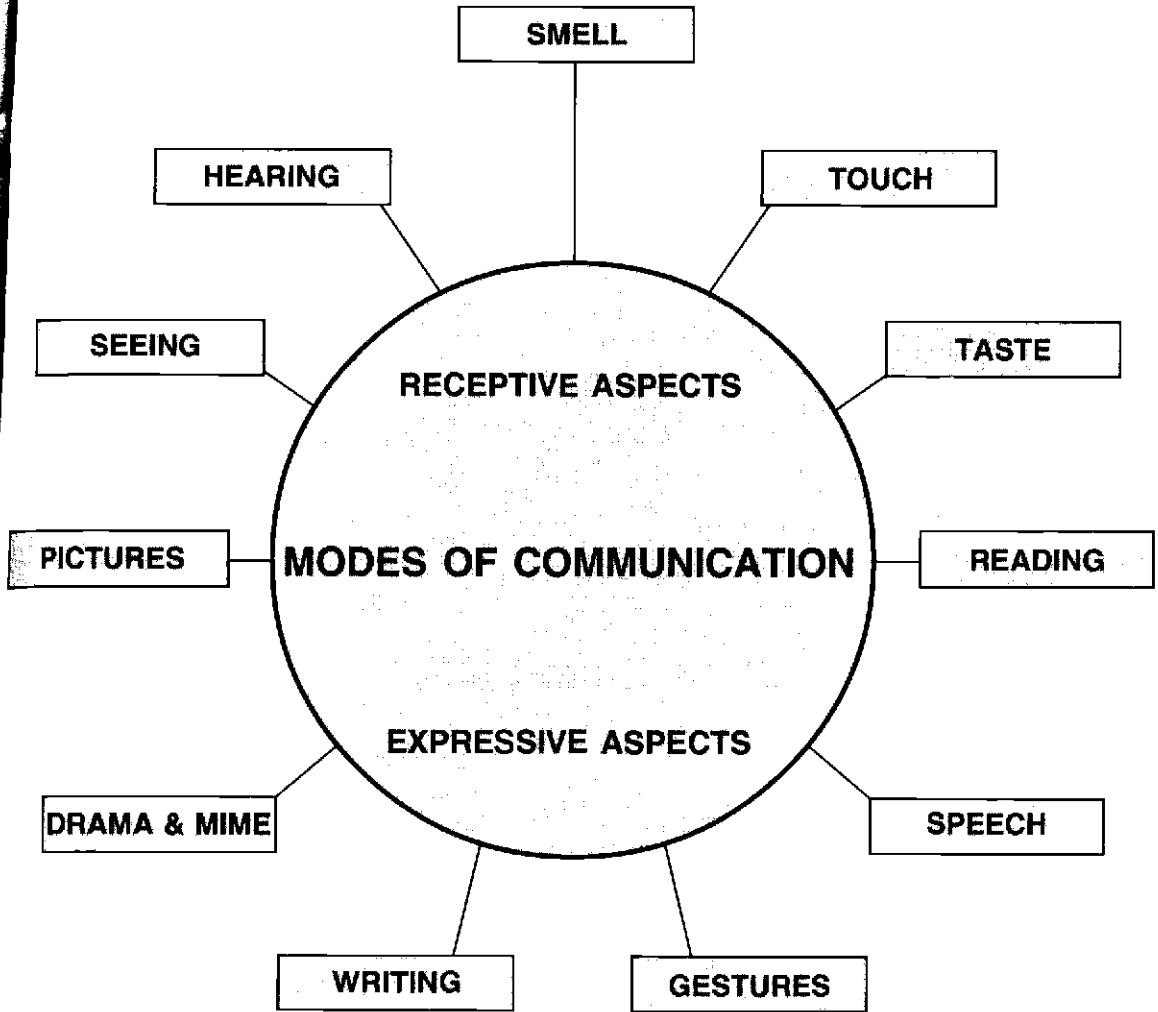
FUNCTIONS OF COMMUNICATION

- To express our needs
- To express our feelings.
- To express our ideas.
- To receive or give the information.
- To control the environment.
- To build relationship and involvement in the community.

    There has to be a reason or a need to communicate to start the cycle of communication.

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CYCLE OF COMMUNICATION

1. Receive the message

9. Anticipate feed back

2. Register the message

8. Send response

3. Recognise the message

CYCLE OF COMMUNICATION

7. Sequence the message

4. Understand the meaning

6. Selection of Words/Sounds/ Gestures/ Pictures

5. Decide upon response and media
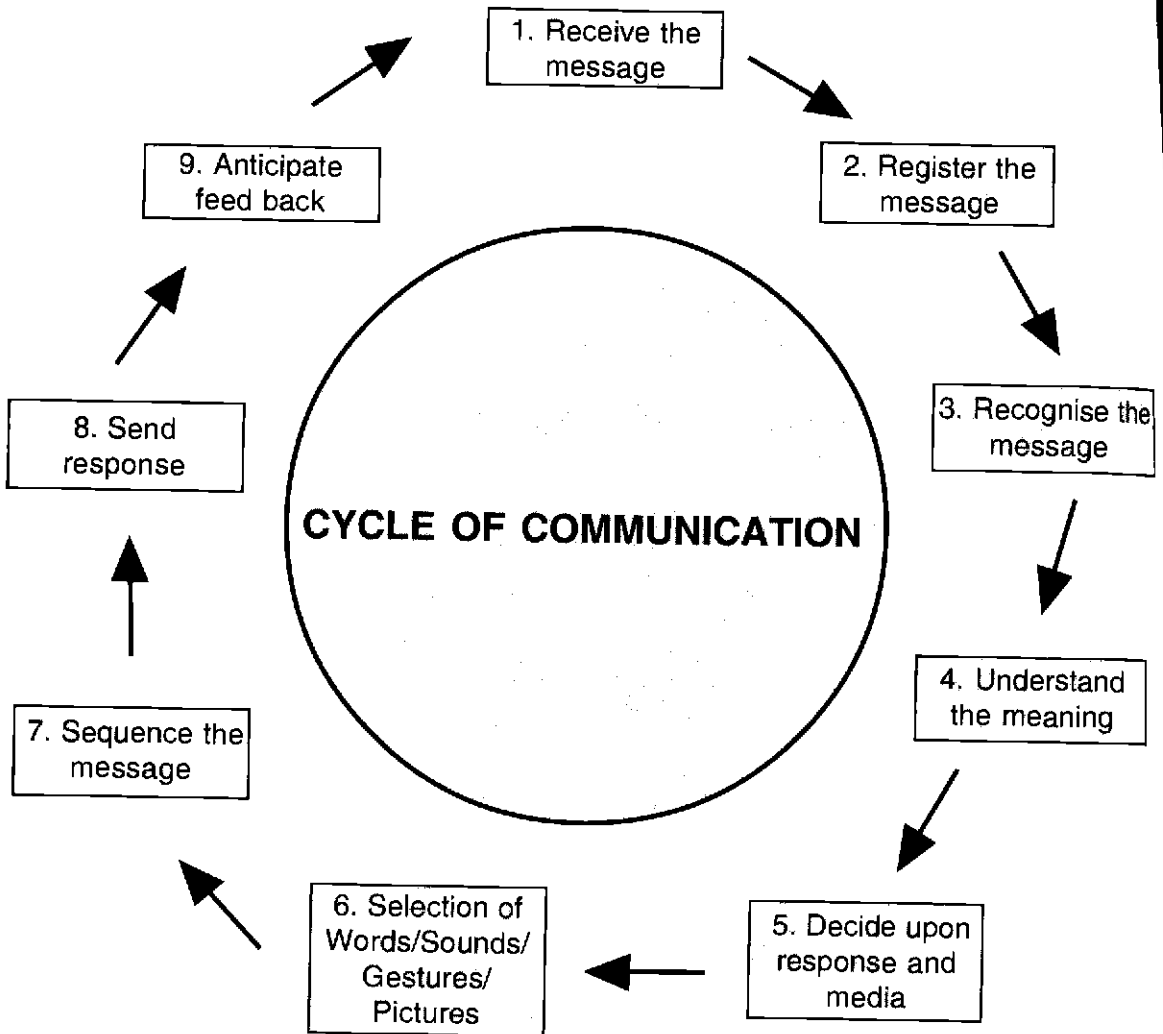
If a person has a difficulty with any of the steps in this cycle, he may be slow to learn communication or the cycle may break down completely.

Elements of Good Communication
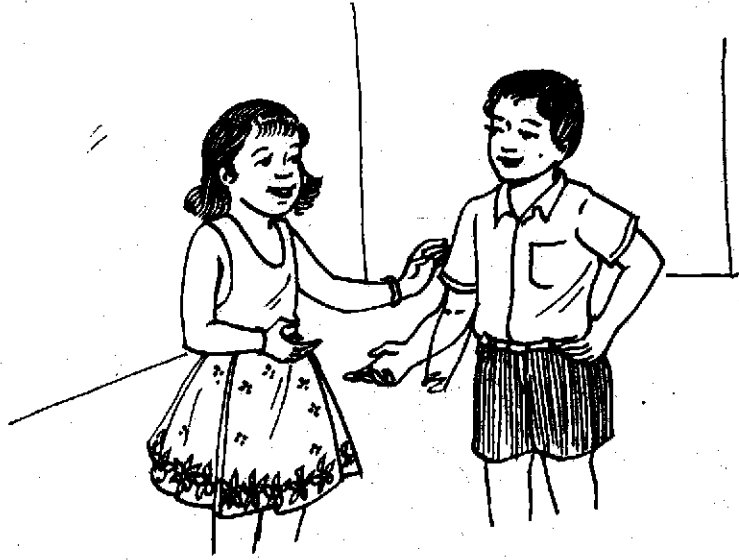
- Topics of interest
- Having eye contact
- Taking turns
- Use of facial expressions
- Use of tone of voice
- Appropriate position
- Common language

Given below are some activities you may use for training :

Group Activities

Divide the group into pairs. Ask one partner to pretend that he is not listening when the other person is talking.

The silent partner should not contribute or take turns during the conversation with his friends. Ask each partner to

- Maintain a comfortable standing position and talk
- Talk in a monotonous voice
- Choose topic of mutual interest
- Not to allow the other partner to speak
- Not to use a common language

(After the activity, participants would narrate the experiences)

Training Material

Lecture & charts.

Things to remember :

- Communication begins when there is a need to communicate.
- Communication is a process
- Communication between people is the sending (expression) and receiving (understanding) of messages.
- Communication involves two or more persons. It cannot take place in isolation.
- We communicate through language. Language may be verbal (spoken and written) or non-verbal (gestures, pictures, signs).

Application Questions :

1. Think of an interesting conversation you had with your friend recently and list the reasons as to what made it a success.

2. Think of an example for what happens when communication can breakdown for you. Try and identify the causes.

Normal Development of Communication

Birth : Cries at birth, gurgles, coos.

Three Months : Looks towards the stimuli, makes eye contact. Attends to familiar voice, becomes alert, stops, changes, activity, begins to cry for attention.

Six Months : Turns to sound of voice. Enjoys babbling, tries making sounds when alone. Listens to the sound meaningfully. Understands inhibiting words, e.g. stop, no, come.

Nine months : Listens carefully to voices. Can distinguish sounds/voices. Understands NO and BYE BYE. Can make a variety of sounds.

Twelve Months : Understands words and simple instructions. Babbles more like speech (Baba, Mama) Listens to conversation.

Eighteen Months : Uses several words with gestures. Combines two words. Speaks one word and uses grammar. Understands 20 to 200 spoken words. Responds to simple commands. Refers to people by names. Begins to express needs through words. Vocabulary grows rapidly due to increased experiences.

Three Years : Listens to stories and can answer simple questions. Takes turns in conversations, speaks in simple sentences. Tells physical needs, refers to self by name. Starts using question forms. Uses first person, i.e. I, ME. Begins using second and third person pronouns, i.e. YOU, HE , SHE.

Five Years : Can pronounce all words, speaks and understands most of the conversation.

Development of Communication

How does communication develop in children?

In fact, all babies begin to communicate from the moment they are born, whether they are disabled or not.

Let us see the developmental stages of communication, and how love affection and touch are important in the process.

In the first month of development, the main behaviour seen with children is reflex response. For example, if we touch a baby's lips we can elicit sucking response from him or on hearing a loud sound he startles. These are involuntary movements to specific environmental stimuli. Later, the baby starts to explore the environment visually. i.e. looking at person holding an object. He also starts playing with his own body. E.g. sucking thumb or toe or scratching on body. Baby and adult arounds him gaze at each other, the baby coos and the person imitates and so on. Gradually the baby starts waiting for the person to respond. This is the stage when child and adult enter in to communication. These types of actions of turn taking become the spring board for the development of communication.

From four months onwards babies start manipulating objects according to their properties e.g. they shake a rattle to make sound or use ball to throw or squeeze a doll to make it cry.

By the age of six months, babies start demonstrating intentional actions with the environment around them. They get the idea that they can make things happen i.e. the baby pulls at an adult's dress and anticipates that he/she will pick him up. The adult also starts accepting such actions and offers vocalization or words. Thus adults help babies to shape their intentional communication attempts and provide them the appropriate media.

By eight months these shaping of intentional actions in words become more successful. Babies now become more aware of the effect of their actions and vocalization on others Now they are truly communicating e. g. baby reaches the desired object and points and looks at the adult who can get it. He uses gestures, signals or sounds to gain the attention of adult and to get things done. These signals diversify over a couple of months. Babbling is soon added to gestures. Child progresses from stage to stage. He learns the skill needed for communication in the environment itself, where he has somebody to communicate with, someone to respond to. In situations where he hears spoken words, by seeing what words refer to, by repeating and imitating words in a meaningful situation, a baby develops and enjoys communication.

Due to deafblindness and additional disabilities, children have significant challenges in development of communication skills. They do not get any information and motivation from the environment around them due to which they tend to be less responsive than their nondisabled peers. As a result, people around them also become less responsive. Children with deafblindness and additional disabilities also find it difficult to explore the environment physically and visually. They may have difficulty to locate the object, hold it, explore and manipulate it properly. Thus, these children become passive and have very limited opportunities to initiate and imitate actions.

REMEMBER

- Communication begins at birth.
- The development of communication proceeds very quickly.
- The child learns many different skills to be able to communicate.
- The skills needed for communication do not develop in isolation.
- The skills needed for communication are dependent on each other.

Skills needed for development of communication :

ATTENTION This skill starts developing when the child first looks at her mother's face and over a period of time develops the ability to spend time concentrating on a single task or activity.

LISTENING Develops when a child becomes aware of most of the sounds and starts to respond to them. It further develops into an ability to listen selectively.

TURN TAKING Develops in the first few days of life when mother looks at the baby and smiles and in return baby imitates the mother and smiles back

IMITATION Develops when mother/caretaker imitates baby's actions and sound and baby copies her in turn. It develops into ability to take turns in conversation.

PLAY Starts to develop when a baby enjoys herself making and listening to sounds and watching and touching faces. This develops into ability to play complex games with rules.

CONCEPT DEVELOPMENT Starts to develop when a child begins to make sense of the things she sees and hears. This develops into the ability to understand adult language, complex games and complex situations.

NONVERBAL COMMUNICATION Starts to develop when a baby cries and wriggles her body and mother responds. This develops further into being able to use more sophisticated gestures.

SPEECH Starts to develop when a child makes cooing and babbling sounds and develops into being able to say words and sentences.

Impact of Deafblindness and additional disabilities on Development of Communication

Introduction

Children with deafblindness and additional disabilities represent an extremely diverse group. The term visual impairment includes range of vision loss from low vision to light perception or to total blindness. Effect of visual impairment could be blurred vision, field loss, decreased visual acuity, etc. Similarly hearing loss can range from total deafness to ability to hear partially. Additional disabilities of these children may include cerebral palsy, hearing impairment, autism, mental retardation or behaviour disorders. For these children difficulties are not added,

but multiplied, creating a unique disability by itself. For these children loss of both the distant senses (hearing and vision) results in severe difficulties in interpersonal relationships, communication and mobility due to which the child lags behind in all areas of development

The interaction and influence of disabilities greatly affect the child's learning and developmental process. Each combination of disabilities results in unique and exceptional learning needs. One has to be aware of the child's ability to process information and the way he expresses his thoughts in order to select strategies for developing communication in a meaningful way

Children with Deafblindness

- Deafblindness is a unique kind of disability. The combination of vision loss and hearing loss affects the way in which the child learns.

- In the absence of two distant senses, the child has limited opportunities to learn about the environment around him.

- His world shrinks to his finger-tips. He becomes severely isolated, which results in passivity.

- Bonding with mother becomes extremely difficult.

- Most of these children may have additional disabilities as well.

- For these children communication becomes very difficult as they have a problem in hearing and seeing, registering, understanding and deciding the strategies for response.

- Some children with deafblindness who do not have any other additional disabilities may have problem only in the area of selection of appropriate medium to express themselves..

Children with Deafblindness and mental retardation

Visual impairment complicates the process of early communication. Children with visual impairment have very little access to communication through, eye contact, gaze and physical expression, which results in social deprivation. Therefore, a child with additional disabilities and deafblindness appears more passive than his sighted peers.

Visual impairment isolates the child from the environment and people around him. In early stages of development, it affects bonding between the mother and child. When the baby is visually impaired and does not offer reinforcement like gazing, smiling and tracking visually, people around him get depressed or withdrawn. Responses or signals of children with additional disabilities are difficult to interpret and hence they may not respond appropriately.

If a child has deafblindness and mental retardation as additional disability,

- it restricts his ability to perceive environmental information.

- he may have problems in registering sounds, to recognize and remember messages,

- he may have problems in understanding the meaning and imitating speech sound or choosing appropriate gestures to convey the message.

Due to all these problems children with mental retardation may have very limited ability to communicate. In addition, due to limited intellectual ability they will be slow in cognitive processes

Children with deafblindness and cerebral palsy
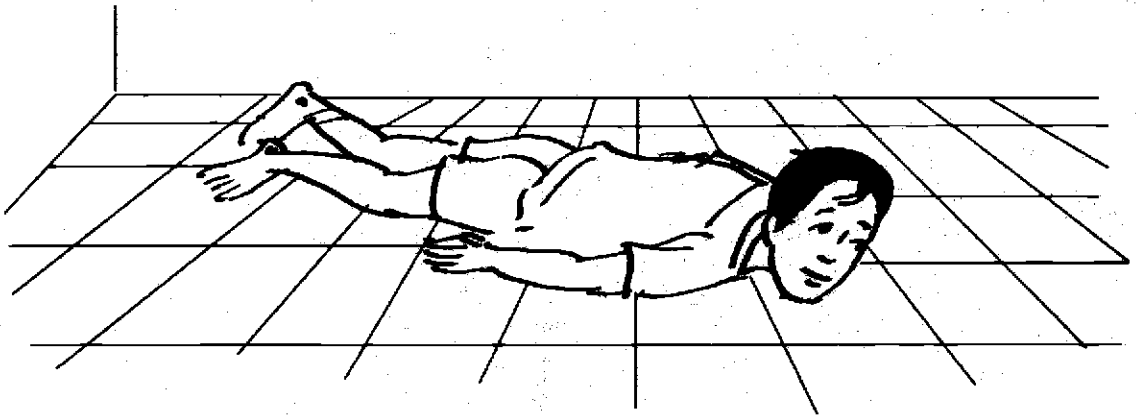
- Children with Cerebral Palsy do not have control and coordination of muscles of their body
- These children have difficulty in movement, coordination and positioning due to damage to the brain

- This may affect areas of vision, hearing, understanding, learning and movement

- Their ability to get around and explore the environment is limited. As a result, these children get less opportunities to learn from and interact with the environment around them.

- Lack of muscle control restricts their ability to produce signs, gestures or speech sounds.

- Most of these children also have problems in understanding, recognition, imitation and expression needed for response. It is important to use different methods of communication rather than just concentrating on spoken language.

Children with Deafblindness and Autism
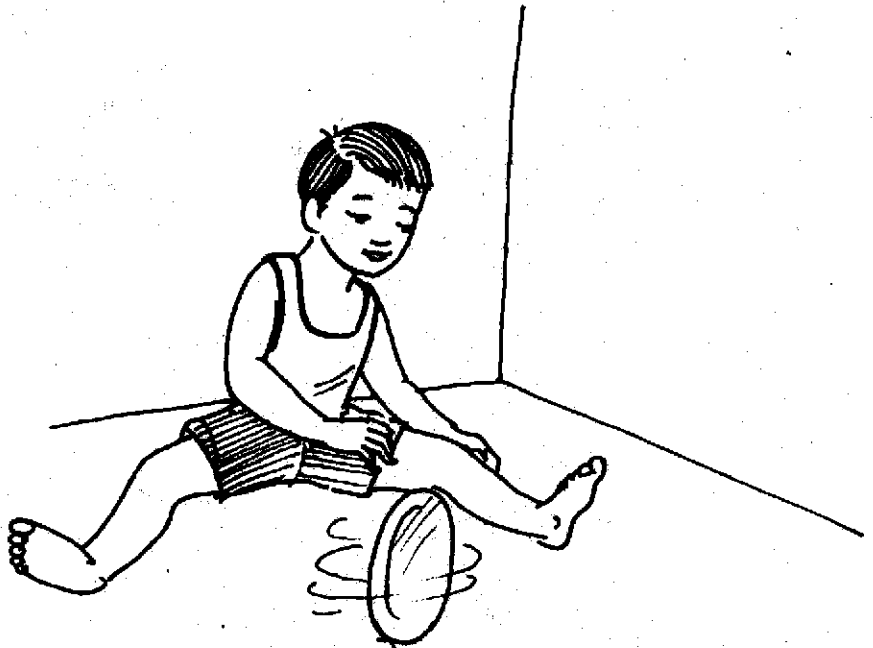
- For children with autism, processing the information, which comes through senses, becomes the problem.

- They find it difficult to understand body language, action, and physical expressions.

- Some of the children with autism are able to process incoming information but are unable to relate the information.

- They also have difficulty in responding appropriately.

- Some of these children may be able to form relationships and some may be able to respond but they do not have access to express themselves so as to be comprehensible to others.

- Development of communication requires abilities to register (process) the message, understand and select appropriate medium to express it, which is affected in these children.

Environment that encourages communication

Communication links peoples with the world around them. It enables expression of needs, feelings, observations and ideas. Without communication a child gets isolated and is unable to control his environment. Communication is a social process which begins with daily interaction between child and adult. Therefore people in the environment should be more observant interpret baby's attempts to communicate.

It is essential for the child with multiple disabilities to have:
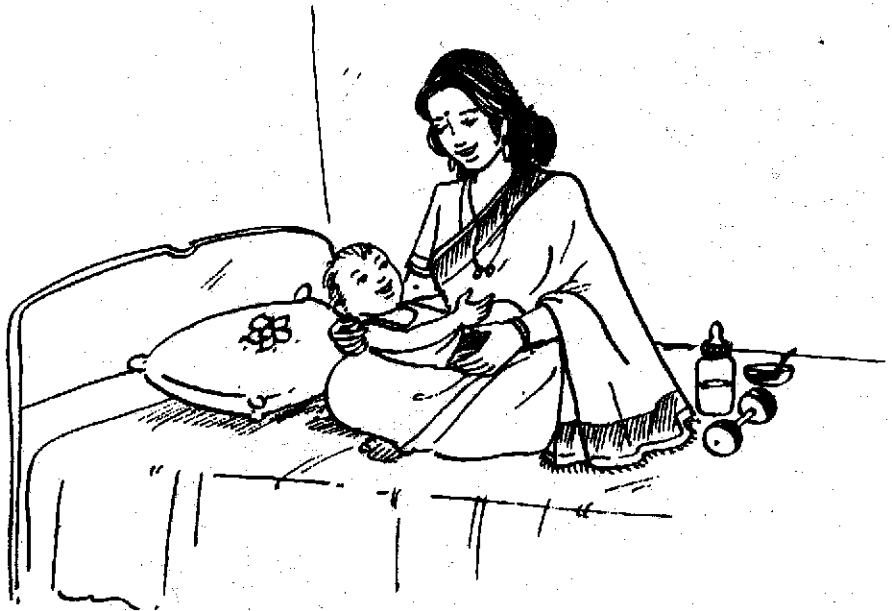
1. **Close relationship with parents or care givers.** This relationship should develop in a natural routine. Parents should be aware of the importance of touching, handling and showing affection towards their child. It may take longer time for a baby with multiple disabilities and deafblindness to respond with smiles or coos. His smile or response may look like grimace. For a child with deafblindness and additional disabilities reflection of his real feelings may not be accurate or easy to understand but parents or care givers must try their level best and to provide a responsive and nurturing environment. It is important that they should interact with him by holding, cuddling and smiling. Tickling, patting, kissing,

holding, stroking, hugging, body games and massage are some effective activities. This kind of close relationship offers the child a sense of security. He will want to be close to the parents and care givers. Bonding between the child and parents and care givers is crucial for his overall development including the development of communication. Some sample activities for parents and care givers are —
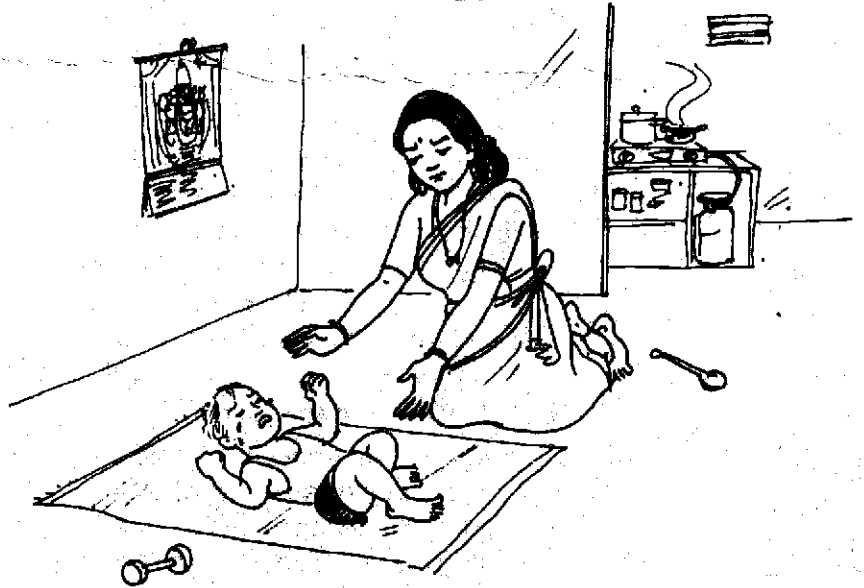
- Talk to the baby when he cries. Let him know that you understand his feelings.

- Touch and hold the baby. Stroking, patting and touching helps him understand that you care about him. Touch is a powerful mode of communication. Without words we can show the affection, love, care and sympathy. It indicates acceptance.

2. **Have somebody to interact with and interact about.** A new-born baby explores the environment visually. Face to face contacts with adults in the environment develops the first relationship for a child. Some times it is hard for parents of children with deafblindness because they show delay in development of smile and tend to be passive most of the time. These children need to be helped to compensate for their vision and hearing through touching, holding, cuddling and stroking.

Letting child touch different things together may help enhancing his interest in environment and people around him. Playing together may stimulate his interest in his immediate environment. Moving and exploring environment together can be fun for both parents and the child. In this way, we can expand his awareness of environment. This

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can be done in different ways. Let parents choose one area/place in the house and explore it with the child e.g. take him to the bathroom, make him feel the floor, tap, bucket, water, mug, etc. and talk/sign about the things around him. A child with vision and hearing learns about the world around him rapidly. He sees and hears things and gets motivated to imitate, initiate and repeat. A child with deafblindness needs to be helped at every stage.

3. **Consistency in routine.** Consistency in routine helps the child with deafblindness and additional disabilities to be secure about his environment. Due to their combined disabilities, what happens in the world is beyond his reach and control. Objects of everyday use, help him to perceive information about activities related. Feed back from his senses and actions may motivate him to explore the environment further. Consistency in routine provides him opportunity for prediction. He learns to anticipate the activities, recognizes and gets physically and mentally prepared for appropriate responses. This may help him to initiate some kind of signals of events he knows. It also helps in concept formation and improving memory.

4. **Physical Environment** : Immediate environment of the child should be designed to encourage his communication. This environmental adaptation and modification should be designed to encourage child initiated, child directed and teacher supported play. Interactive and play oriented environment proves to be very effective to teach communication and language to the child with deafblindness and additional disabilities.

Many children with disabilities who have vision problem are at disadvantage for developing perceptual and communication skills through use of vision.

- Limited body movement inhibits ability to adjust.

- Child may not be able to turn towards the source of information.

- Child may be physically restricted in the ability to self initiate.

Due to these problems, the child lacks contact with the world which limits his ability to build communication meaningfully.

The immediate environment of the child should be designed to develop and to encourage his communication skill. Interactive and play oriented environment proves to be effective in the process of communication and language development with deafblind and multi-handicapped children. There are no strict guidelines. The following suggestions and ideas may be useful in designing individualized programme.

1. Good positioning and appropriate seating arrangements certainly helps in enhancing child's ability to focus on and interact with his immediate environment. One needs to consider child's height and size, chair's height and size, depth of seat and height of table top in relation to child in order to provide appropriate positioning and seating arrangements.
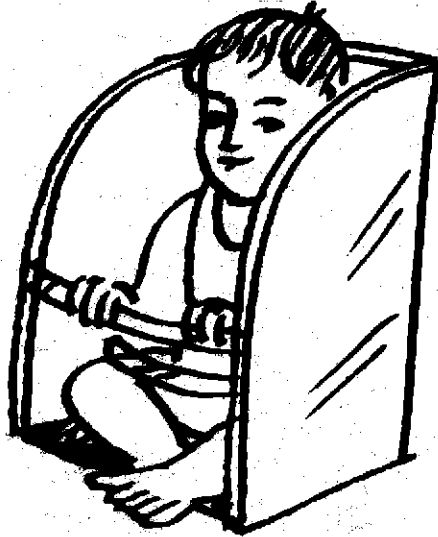
Children with physical disabilities may need adaptive equipment, i.e., corner seat, higher chair, head supporter, etc.

2. People in the environment need to be considered. What people wear can aid in the process of communication development with children with special needs. The very pattern of clothes can cause confusion, if you are holding something for a child to see. If the child has deafblindness, signs can be lost in the background pattern. Therefore one needs to consider contrast and clarity.

3. The room should be free of unnecessary distractions or cluster so that the child can concentrate more on activities and play in a meaningful way.

4. The material in the room which is required for activities or play should be organized in such a way that the child or teacher can approach easily. It should be within the reach of the child.

5. One needs to consider the space/distance between the object, signs presented to the child and teacher, especially, with a child who has low vision. It should not be too close or too far. It should be within his visual field.

6.   It is helpful to add tactual cues in the environment. It enhances the child's sense of security and anticipation of places and things around him (Braille labels, Tangible Symbols, Object of reference could be used for this purpose).
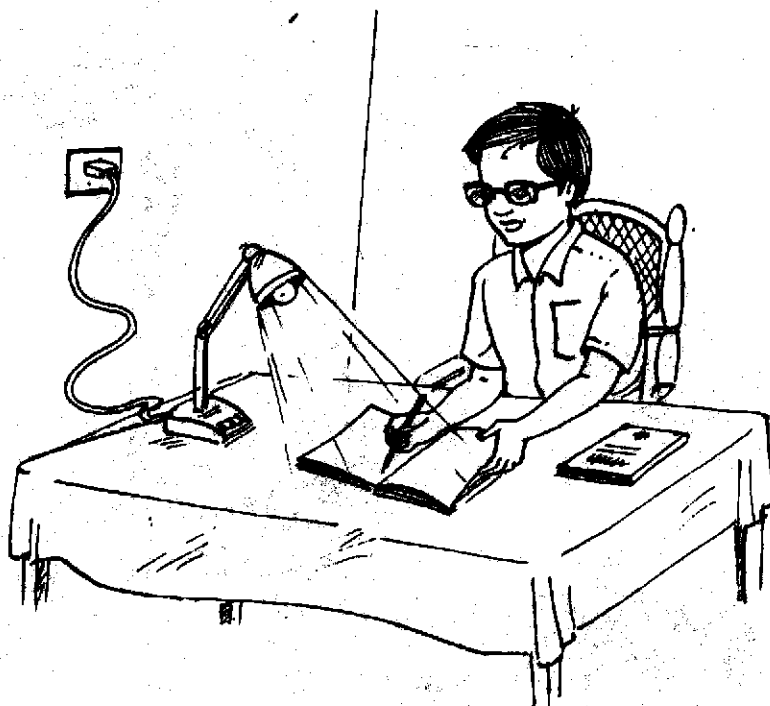
7.   When considering light/illumination one needs to remember that there are two types of lighting, (a) Environment Lighting (b) On Task Lighting.

●   Environmental Lighting – The overall lighting and natural lighting coming through windows.

●   On Task Lighting – Lighting that allows concentration of light near the child. The aim is to concentrate the light on task and not into child's eyes.

There are various types of on task lighting in the market. It is also important to ensure that level of lighting is good and the child's position in relation to source of light is correct. Care should be taken while positioning the child. Ensure that light comes from behind the child. No bright/sun light should be shining on the child's face that produce glare. Make sure that you are clearly visible to the child with light falling on your face, hands and not from your behind, which may produce shadow.

8. A child with Low Vision can locate, identify, organize objects if provided with high contrast between object and work surface. Colour combination/colour contrast should be suitable depending on the child's specific needs.

9. Presentation of objects or activities should be adjusted in order to allow ample time for response from the child. Reduced vision, medication, physical disabilities or perceptual problems may decrease the specific response rate of child. Activities or objects that are presented too quickly may decrease the child's ability to recognize the object or follow the steps of activities.

10. While considering sound, it is worth examining whether they are meaningful and of interest to the child. For children with multiple disabilities/deafblindness the information gained from sounds in the environment can be either of value or a distraction. Factors that will affect a given sound will include

- Size of room
- Furnishing
- Number of people in the room
- Position of child in relation to the sound source

Some children are very sensitive to stimuli or highly distracted. It is very important to reduce excessive vibration or noise or visual stimuli when introducing auditory activities.

One needs to—

Draw child's attention to all material/people involved

Use demonstration and co-active movement to help the child to know what is happening.

Strategies to enhance communication in children with deafblindness and additional disabilities. :

1. **Turn taking** : Turn taking requires responding to the child's behaviour and communication. Allow child to respond. Turn taking creates foundation for development of communication. Turn taking is an important strategy because the child learns best from a model that is close to his level of communication.

Activities : Stacking blocks, cups, stacking tower, choosing snacks, singing, clapping

2. **Choice making** : Choice making offers opportunity to the child for active participation. Choice making offers a sense of control. It is essential to provide several opportunities throughout the day to make the child learn about choice making.

3. **Imitation** : Imitation is modeling and demonstrating the desired response and encouraging child to imitate.

4. **Exploring together** : Exploring enables the child to feel secure about the world around him. It helps to make new discoveries and learn about the world. It stimulates the child's curiosity about the environment. It develops skills to learn new things.

Activities : Exploring environment/using objects together.

5. **Manipulating** : Games enhance the child's ability to co-ordinate his eyes and hands, which enables child to have control over toys/objects.

By manipulation he learns all about objects and how to use them, which enhances his self respect/independence in future.

Activities : Using cutlery, writing, drawing. Share child's interest and show him how to manipulate objects/activities/environment.

6. **Socialisation** : Socialisation is interaction between two or more people. It involves give and take.

It encourages and offers opportunities for the child to observe people and imitate them.

It offers opportunity to learn, practice and develop communication skills.

It enables the child to experience turn taking and interacting with people.

Activities : Playing with other children/adults.

7. **Pretending games:** Pretending games enable the child to use his imagination to make the objects into symbols.

It is essential for the development of thoughts and language.

It enhances the child's experience and encourages him to be creative.

It prepares the child to make sense of the situation and face it.

Activities : Observing activities of other people. Motivate him to do activities by himself like shopping, cooking, etc.

8. **Problem solving games :** It helps the child to think carefully how to carryout an activity and work things out for himself. It develops child's thinking power, which enhances his curiosity and confidence. Give the child time to try out on her own and solve her problem.

Activities : Puzzles, looking for hidden toy/objects/person, matching, discriminating, grouping.

Application Question

Q.1. Explain the importance of environmental modification to enhance communication.

Q.2. Explain strategies for communication development.

DEVELOPING EARLY COMMUNICATION IN CHILDREN

- Sheela Sinha

In this module you will learn about –

1. The beginning of communication process :

   - In all children.

   - In children with deafblindness and visual impairment with additional disabilities.

2. The importance of starting early.

3. Strategies that promote development of communication in early years.

When does the communication process start?

Communication process starts at birth. The capacity to communicate is an inborn one. The child starts interacting with his mother or other care givers right at birth. The mother attends to the child's cry , makes him comfortable, smiles at him, talks to him in baby language and the child gets attached to her. He starts responding to her in his own little ways and an interaction starts. Some of the ways in which the child may communicate in early years are:

- Facial expression.
- Vocalization.
- Change in muscle tone.
- Touching or manipulating others.
- Movements.
- Assuming positions.
- Pointing.
- Natural gestures.
- Showing aggression (biting, pinching, throwing things etc.)

In children with vision and hearing these basic communication skills get nurtured, groomed or modified and changed incidentally during their interaction with others. Children with deafblindness/visual impairment with additional disabilities, on the other hand, do not have the security and motivation to move around and interact with people and objects in their environment. The information they receive about their environment is also distorted and interferes with their interaction with others. They thus often remain isolated and face the challenge of having very little opportunity to acquire communication skills incidentally. They need some kind of intervention in order to be able to connect with their environment successfully. The degree and kind of intervention needed would vary from child to child. **With a suitable intervention program, however, all these children can acquire varying degrees of communication skills.**

When should the intervention process start?

The intervention process should start as early as possible. If the child receives professional help early in life it is easier for him to develop meaningful relationship with people and objects around because:

- Early bonding provides a sense of security.
- The child feels motivated to move around and explore.
- The child learns to occupy himself with useful and appropriate play / routine activities rather than merely being engaged in self stimulatory behavioural patterns.
- The child learns a way to express his needs and desires early in life.
- The child starts receiving medical and para medical support early, which helps communication process (starts using glasses, hearing aids, special chair, orthopedic equipments and develops better posture, balance).

Points to remember –

- All children can communicate.
- Children start communicating right at birth
- Children with deafblindness/visual impairment with additional disabilities need some kind of intervention to develop communication skills.
- It is important to start working with these children at an early age.

What are the strategies that promote communication in early years?

A. Bonding

a. What is bonding?

Bonding is 'developing relationships'. It implies mutual trust. Social relationships or the need to interact with others is the basis for communication development. When two people trust each other, a relationship develops between them and they start interacting with each other. The mother comforts her baby, responds to her cry, carries her the baby instantly trusts her, gets attached to her and a relationship begins.

b. Children with deafblindness/visual impairment with additional disabilities may have difficulty in establishing such spontaneous relationships in normal course. This is because:

- Eye contact is difficult to establish due to visual impairment
- They may not be responding like other children e.g. by smiling or vocalizing when parents try to play or interact with them.
- Parents may not be able to interpret their unique ways of communicating e.g. by slightly turning head away the child may be trying to focus on the mother while she is talking to him but the mother may think he is disinterested.
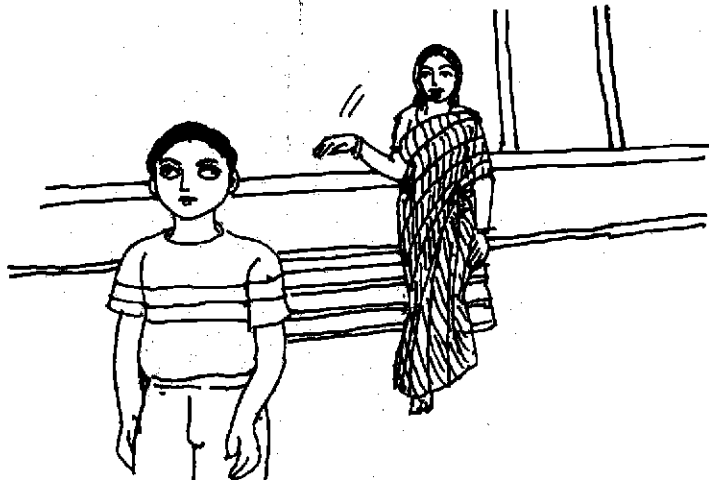
- Some children may not be able to cry or may have a very feeble cry. As a result they may not be able to attract the parent's attention when they need it. This prevents them from getting attached to people around.

- There may be additional health problems or neurological complications due to which they are constantly fussy or irritable. They may be also having irregular sleep pattern or may sleep too much due to medication or seizures.

- Parents may be unable to attend to them in a consistent manner due to their own overwhelming feelings of sadness or denial.

- Parents may find it difficult to handle or hold the child due to severe motor disorders.

With timely and appropriate intervention however, these children too can develop long lasting and loving relationships.

c . How do we help a child with deafblindness/ visual impairment with additional disabilities establish emotional bonds with people around?

1. Be physically close and comforting-

- Hold, touch, cuddle and gently stroke your baby frequently even if there is no visible response from him.

- Quickly comfort the baby when he is fussy, frightened or in some kind of discomfort.

- Keep your mouth close to his cheeks and sing/ speak softly.

- Help him feel your mouth/ face while you talk.

2. Go through pleasurable activities together

- Keep him in your lap or right in front of you and gently move, rock, sway or throw, catch, dance, jump, swing along with him, singing songs, reciting nursery rhymes or talking in a pleasant tone.

- Play little body games with him : tickle games, finger games, clapping games, games which involve touching nose ears etc., peek a boo ! or anything that the child enjoys.

- Talk to him in a baby language as you would do to a normal baby.

3. Explore the world together –
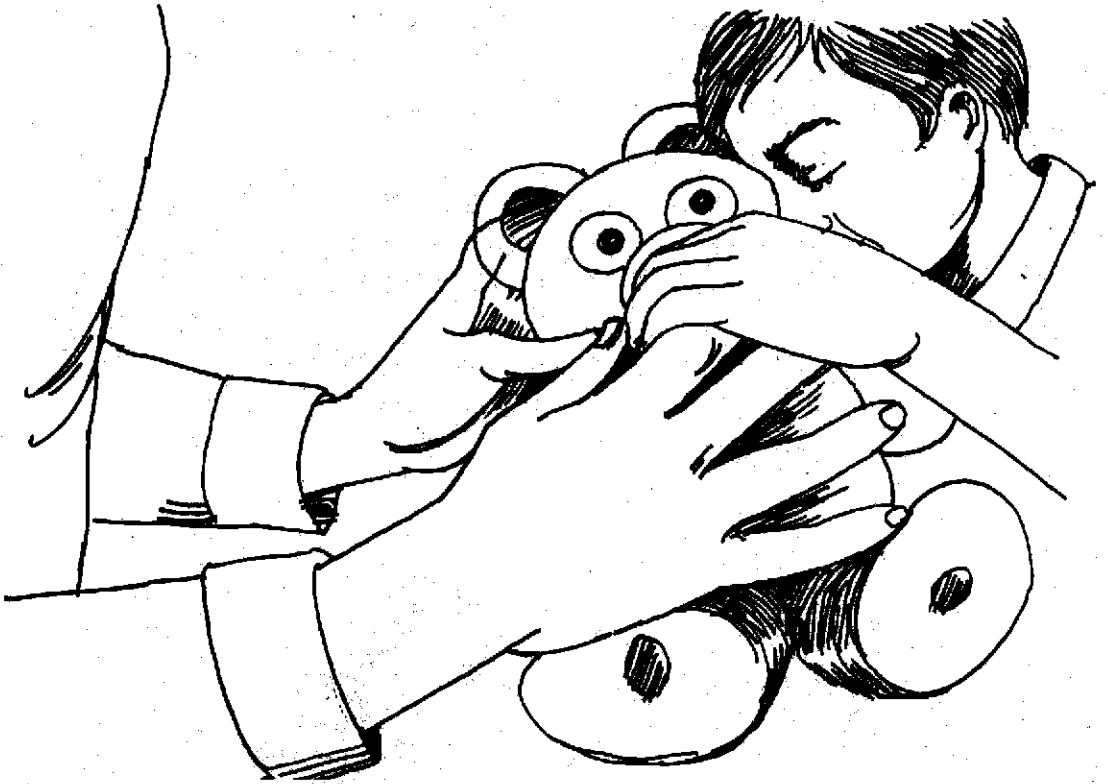
- Feel toys, objects around the household, functional objects that he or other family members use like comb, toothbrush, hair band, watch, jewellery etc. along with him. Help him go over things with your hands touching his.

All these simple strategies and 'doing togethers' would make the child feel more secure and establish trusting relationships with others. He will also be more motivated to move around and interact with people and objects around.

B. Imitation and turn taking

a. How does imitation and turn taking help?

Any social interaction involves give and take between two people. One person starts an interaction and then the other person responds. The first person again does or says something while the other waits for his turn and thus it goes on. So taking turns and waiting for one's turn is required in all social exchanges. Involving a deafblind child in a turn taking game thus teaches him the first rule of conversation. By imitating the child's behaviour we attract his attention and invite him to participate in a back and forth game. Imitation thus helps in starting and maintaining a turn taking game.

b. How do we develop a turn- taking game?

It can be done in various ways –

- By imitating a vocalization pattern -Start a vocal play by imitating the child's vocalization pattern e.g. the child says da-da, you also say da-da or if the child clicks his tongue then you also produce the same sound.

- By imitating a movement pattern like tapping, clapping, shaking etc.

- During classroom or play activities like stacking blocks, removing pegs, dropping marbles in a box, jumping on a trampoline going on slide or anything that the child enjoys. Deafblind children often enjoy turn taking games that provide movement or tactile stimulation. An example of latter could be a peek a boo! game or a tickle game.

- Even while eating – especially while eating finger food, washing hands etc we can have some fun by taking turns.

Note – Imitation of child's movement or vocalization pattern may not always develop into a turn - taking game. Similarly, the child may not follow the pattern initiated by us. Nevertheless we need to continue doing it in different ways.

Apart from this deafblind children like normal children should be encouraged to wait and take turns while the food bowls are being passed at meal times or when two three children want to play with the same toy.

C. Developing anticipation

a. What is anticipation?

Anticipation is simply the knowledge of what comes next.

When the child begins to understand what is going to happen next, like where he is going, who is going to be with him, what he is going to do then he is better prepared for the next event. He does not feel threatened when others approach him and is ready to interact with them. Gradually he even starts showing some choices e.g. if he understands that the food is close by he might open his mouth if he is hungry or turn his head away if he is not.

b. How do we develop anticipation in a child with deafblindness / visual impairment with additional disabilities?

Use Touch Cues – Touch cues are the cues made directly in contact with the child's body. Some examples are:

- A gentle tap on the lips means food is being given.

- Stroking the feet means shoes have to be put on.

- A gentle rub/ pressure/ tug under the upper arms means he/ she is going to be picked up.

- A gentle brush down the thigh or a tap on the bottom means diaper change.

- A gentle pressure on the child's shoulder means sit down.

- Placing your hand by the side of the child's face means time for sleep.

These touch cues should be made -

- Immediately before an action or activity.

- In the same way each time by each person who interacts with the child.

- In distinctively different ways for two different activities.

- In a way that the child gets some time to respond before the action takes place.

- Keeping the child's individual likes and comfort in mind. If the tap on the lip appears to be too startling for him or the rub under arms too confusing, then we need to change the cue.

Use Object Cues – Use an object which is associated with the activity. Some examples are:

1. Wrap the child in a certain type of towel every day before taking him for bath.

2. Put on a bib before you feed the child every time.

3. Give him a spoon when it is meal time (in case of slightly older children.)

4. Give him a ball or any other handy toy which he uses every time it is his play time.

5. Give him a cap when it is time to go out.

6. Give him a sound maker or a discarded headphone /hearing aid every time he has to go for a session with the audiologist.

The type of object cues used with a child might change as he grows up –

● Use the actual object that he uses e.g. his own towel for bath time or the bottle of jam from which the jam is taken to be applied on his slice of bread for snack time.

● Then an object which is similar but not used itself e.g. another towel which is similar but not the one he uses or another jam bottle which is similar in shape and size. In some cases the child may need identical objects.

● Then it could be a part of the object e.g. a piece of the towel or the cap of the bottle in the latter case

● Then it could be the picture/ photograph of the object – if the child can identify pictures.

Make these changes only if it suits the child.

If we use these tactile and object cues regularly after some time children start making a connection between an object or touch cue and a particular activity. So when they again receive that cue they are ready for the coming event. They even start responding accordingly – the child may become quiet once the bib is tied even if he is hungry because he knows he is getting food. Or he may quieten even if he is uncomfortable when he receives a particular body cue because he knows that he is going to be picked up. With regular use the child slowly learns to use these objects himself e.g. may start bringing shoes when he wants to go out.

Maintain a consistent routine-

Things should happen in the same order every day. If every day it is swimming after story time then the child begins to anticipate swimming. He may even take out his swimming trunk from the cupboard on his own after the story is over.

Maintain consistency in physical environment and activity / play area used with the child –

● Keep the furniture, objects in his environment, and his own belongings like shoes, bag, toys etc. and the chair / mat that he uses, at the same place. Moreover do not change them frequently.

● Have fixed areas/ corners/ rooms for different activities like Bathing, eating, playing, sleeping, listening music and so on. If the child eats at the same place every day, then he would know that he will get food is when he is taken there.

Stimulate all the senses-

If the child is consistently given multi sensory experiences and receives sensory cues in the appropriate context e.g. is exposed to the smell of

a flower when he is taken to a garden or to the sound of vessels/ pressure cooker while he is in the kitchen at meal time, then he also learns to interpret visual cues, smell cues and auditory cues for e.g. the smell of food in the dining room will tell him that he is going to have his lunch. Or the sound of water falling in the bucket will tell him that he is going to have a bath.

Points to remember

- The child feels more secure and starts interacting with people around if he knows what will happen next .

- We can give him/ her an idea of coming events by using different types of cues such as tactile as smell visual and auditory.

- A fixed daily routine and a consistent physical environment also helps the child in anticipating what his day is going to be like.

- It is important to consider the child's comfort and preference while deciding upon the cues.

D. Maintaining a responsive environment

a. What is a responsive environment?

A child's environment is responsive when the people around understand his needs and take steps to satisfy them, when they respond to his little gestures and movements appropriately, when they take interest in him and play/ talk with him frequently or when they reward him with warmth and praise for slightest achievement. If a child with deafblindness/visual impairment with additional disabilities receives such an environment from the beginning, he starts trusting others and feels motivated to interact with them. If on the other hand he is surrounded by people who are not sensitive to his needs and fail to give him timely help and attention, then feeling lonely and confused, he withdraws in his own world.

b. How do we create a responsive environment?

1. Be observant and try to find out whether the child is uncomfortable or needs something whenever you notice some change in facial expression, movement, posture or sound.

   Children with deafblindness / visual impairment with additional disabilities often express their needs in a very subtle way. A slight change in facial expression, a small body movement or a little sound may mean something. Maybe he is wet or wants to be picked up or wants more of the song you were singing to him and so on. These little changes in his body language are often so unique that you are likely to misinterpret them e.g. if the child turns away slightly

while you are talking to him, you may feel he is disinterested but he may be actually trying to listen. It is therefore important to interpret them correctly and respond to them appropriately. If you respond consistently then the child will know that by giving these little signals he gets what he wants and he will use them more and more.

2. Advise family members to keep the child in an area where others are and to involve him in the family's routine activities.

    Ask the mother to :

●   Keep him near her when the family is having dinner or watching T.V, or sitting together for an evening chat or when she is cooking in the kitchen.
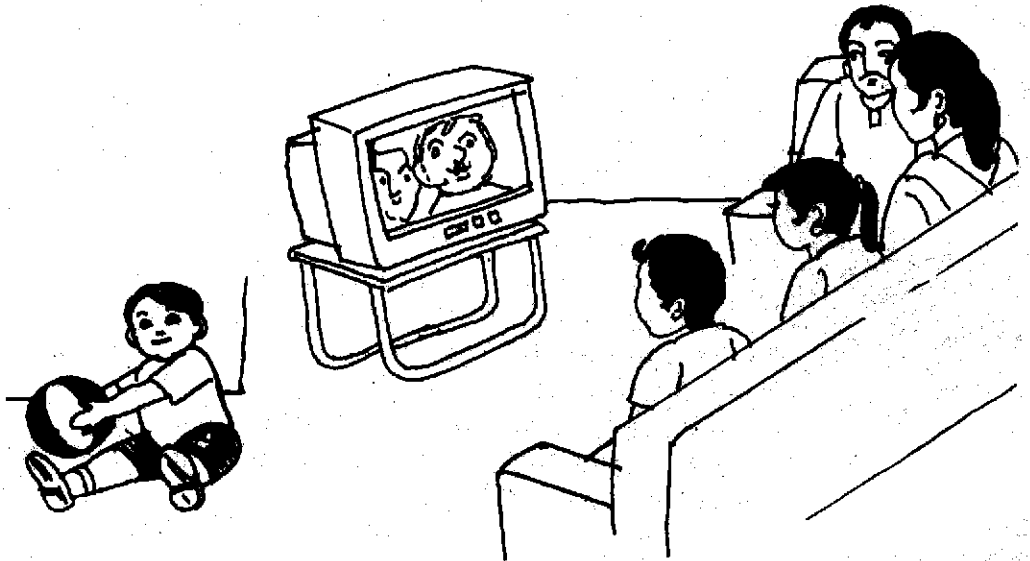
●   Let him know that she is around by touching or talking to him.

●   Talk to him in between about what is going on.

●   Let him play with some functional object if he likes it e.g. a spoon, an empty container, a small vessel, a comb, a piece of clothing or anything else.

    In this way she will be able to attend to him more frequently and he will receive all types of sights sounds and smells from the environment.

3. Respond even to the child's random movements, smiles, vocalization etc. –

    Many times the child's movements or vocalization may not mean anything. You should still reward these behaviour patterns through touch, baby talk and imitation, If you do so consistently the child

begins to realize that he can get your attention by doing something. He is then likely to repeat that behaviour e.g. If every time you start talking to the child when he vocalizes, after some time he may start vocalizing purposely when he wants you to talk to him.

Points to remember

- A child with deafblindness/visual impairment with additional disability can be encouraged to interact with the people around by consistently responding to his body language.

- We need to keep the school as well as home environment stimulating and accessible to the child.

- We need to guide the family regarding ways in which the child can be involved in the family routine.

E. Using play as a medium of communication

What kind of play situations can we use with a deafblind child?

Play is a powerful medium of expression and can be very effectively used for developing interaction and social behaviour among children. Like any other sighted hearing child, a child with deafblindness/ visual impairment with additional disabilities too can use and enjoy a variety of play items and games. A few examples are as follows:

Play with toys :

Invite the child to play with a toy by gently introducing it to him, showing him how it works and then give him time to explore it. If you quickly put away the toy thinking that he is not interested then he may not develop a curiosity to know what it is. So use it in different ways yourself to arouse his curiosity but do not force it on him. Remember the purpose is to develop an interaction by having some fun together rather than teaching the child how to operate the toy.
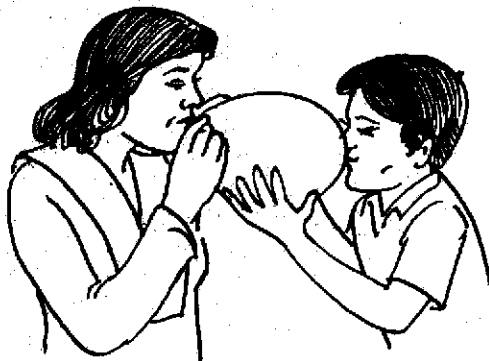
Play with balloons, bubbles, tops, pull apart toys, cars, winding toys, different kinds of balls, toys which need pulling and pushing, nesting cups, dolls, shining paper which makes some sound or even functional objects if the child shows interest in them like comb, toothbrush, a soft piece of cloth, a pillow small vessels etc.

Play with sound:

Use sounds made with balloon, toys, percussion instruments, environmental sounds (imitate it, take him to the source of the sound and if possible reproduce it) like sounds made by pressure cooker , a scooter , a door bell etc., sounds made by body e.g. clapping, tapping on his tummy, making sound with your mouth on his hand and so on.

Play outdoors:

Go on slide, swing with the child, play with sand, swim if a pool is available otherwise play in a large tub of water, collect small stones, leaves etc., run in an open space along with the child, roll on grass with him and make him walk bare footed or play with anything that interests the child – a stick, a gate, a little slope and so on.

Play with tactile materials:

Play dough, clay, flour, coloured sand, packing material, bubble papers, beans, different types of brushes – all these can be very interesting play material and can be used in different ways.

Play with peers;

Circle games, taking turns on slide, swing, jumping on a trampoline together, sharing a toy, and dressing up a doll together or simply sitting together and listening to music.

All these things/ play situations can be useful only if we encourage the child to interact with others around, give him ample time to respond, observe carefully what interests him and so on. Moreover we need to use our own body language to make it interesting, make faces, exclaim, clap, laugh, act and talk while playing.

Points to remember:

1.   Play of all sorts is an effective tool for developing interaction among children with deafblindness/ visual impairment with additional disabilities

2.   The emphasis in a play situation should be on having some fun together rather than on teaching a game.

F. Marking the beginning & end of an interaction and using personal identifiers

Q1. How do we greet and take leave from a deafblind person?

Q2. How do we help a deafblind person identify others ?

All social interactions have a beginning when a person greets another person, a middle when both the partners recognize each other and carry on a conversation and an end when they take leave from each other. It is important to follow this order while interacting with a person with deafblindness/ visual impairment with additional disabilities too, in a way that he understands. It is very disrespectful and can even be threatening to a young child if you approach him suddenly without preparing him for the interaction or leave him wondering whether you are still around or not. He must also have a way to know who the other person is and to have a name for himself . You, therefore, need to have an identifier for each person who is important to him and one for himself also. This gives him a sense of self and also prevents him from feeling startled or insecure when others try to interact with him.

A few general guidelines –

- Touch the person gently on the shoulder or back of the hand before you start talking to him.

- Greet him the way you would greet others (e.g say 'hello'), using speech and gesture/sign.

- Identify yourself through touch by letting him feel a specific tactile identifier you normally use e.g an earring, a certain type of watch, a bracelet, a large ring, a hair band, a pair of glasses and so on. Some people can also be identified by a distinct hair style or moustache.

- An olfactory identifier can also be used e.g. a certain after shave lotion or cologne. It you always wear the same cologne then after a while the child would start associating you with that scent. Some children, however, may be sensitive to strong smell. Therefore exercise caution while using smell as an identifier.

- Some people also have a very special method of greeting the child e.g. whistling in a particular way or calling the child's name in a certain way. So this style of greeting becomes their identifier.

- The child and his peers too need to have identifiers for themselves, something that they consistently use- a cap, a hair band or a plastic toy that he likes.

- Have name signs for the child and the other significant people in his environment. These name signs should be developed in a way

that they get connected with the object identifier also for e.g. If a child's symbol is a hand band then his name sign should be made on the wrist.

- Always inform the child before leaving. You can gesture/ speak / sign and speak – visually or tactually - according to the child's ability and type of impairment. Use expressions which you would use with others like bye-bye of see you tomorrow.

Points to remember-

1. It is important to let the person with deafblindness/ visual impairment with additional disabilities know that you are around before starting the conversation.

2. It is equally important to inform him before leaving in the way he understands.

3. There should be tactile/ olfactory identifiers for the child as well as for the other significant people with whom he interacts

Activity 1. Participants will be placed in the early intervention section in the groups of 3/4. Each group will observe one child through the morning session. The entire group will then meet again and has discussion regarding:

1. What were the different strategies they saw being used with the child they observed?

2. Was there meaningful communication taking place between the child and the teacher?

3. Was the child given enough time to respond?

4. Which aspect of the teacher child interaction did they like best?

Activity 2. Develop a 'Dream Environment' for a young deafblind child. Write down at least 5 things which you think you should have in this ideal environment if you want to maximize communication development.

Activity 3. Ask for a few volunteers and divide them into two small groups. Blindfold them. Have a one/two minutes conversation with each person in the first group in a respectful manner – approaching him gently, introducing yourself with the help of an identifier, greeting him before you start talking and taking leave properly.

Have a conversation with the members of the other group without following any of these rules. Let both parties share their experiences with the whole group.

Activity 4. Get into groups of 3/4. Each group will be given the profile of a young deafblind child. The group has to develop an appropriate routine activity for that child. Give examples of the kind of communication that can take place at each step during the activity.

Activity 5. Divide the group into 2. Each group has to take turn and suggest 5 routine or play activities and the other group has to come up with an appropriate touch cue for each of them.

Activity 6. Make simple and inexpensive toy or play material like finger puppets, stick figures, paper fan etc.

Activity 7. Viewing and discussing the video 'Making the Most of Early Communication'

The elements of a good informal communication:

- Let the child know you are there.
- Let the child know who you are.
- Use touch/ object cues.
- Give choices.
- Let the child know what is happening.
- Consistently use cues in daily routines.
- Cue – pause – expect a response – observe – respond – reinforce.
- Let the child know when the activity is over.
- Let the child know you are leaving.

Application Question

1. On the basis of what you have learnt how will you explain to the parents of a child with deafblindness/ visual impairment with additional disabilities that it is important for their child to start coming to school as early as possible?

2. What arrangements will you make to enhance the possibility of different kinds of play for your young students when you go back?

References:

1. Remarkable Conversation by Barbara Miles & Marianne Riggio.

2. Understanding Deafblindness
   Issues Perspective and Strategies, Volume 1, Ski Hi Institute

3. INSITE Model, Volume 1

4. Hand on Hand, Volume 1

Additional reading:

Understanding Deafblindness – Communication Basics (p381-410); Early Communication (p411- 442); Communication: Interactive-Relationship (p445 – 464)

- Sheela Sinha

In this module you will learn about –

- What are the different modes of language based communication?
- How do you build up first vocabulary?
- How do you promote communication development by using multiple forms and levels of communication?

A. **What are the different modes of language based communication that people with deafblindness/ visual impairment with additional disabilities use?**

As the child comes out of infancy he slowly acquires the capacity to communicate through 'words and a formal language system with a definite structure'. Children with vision and hearing are constantly exposed to spoken words and their context right from the beginning. It is therefore easier for them to start using these words themselves. Children with deafblindness/visual impairment with additional disabilities, on the other hand do not have access either to spoken or written language in the form we use. They may need special forms, modes and methods of presentation. Some of the commonly used modes are as follows:

1. **Manual Communication** involves use of hands to receive and express ideas and concepts. It consists of -

A. **Sign language**
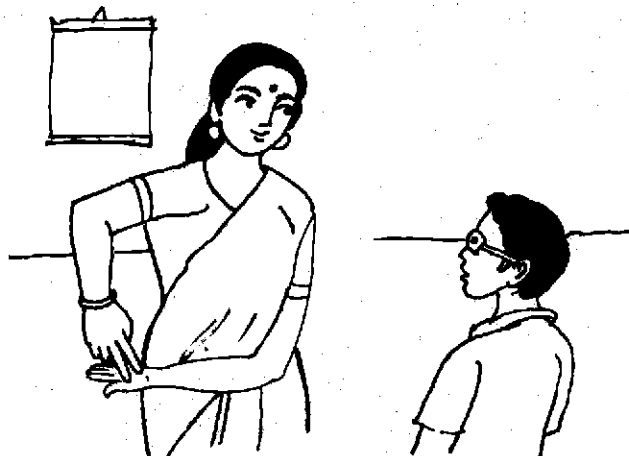
Sign language involves using specific hand shapes and body movements to express ideas and concepts. It can be visual or tactual. In visual signing the signs are made in front of the receiver, normally at eye level. However, exact positioning and the distance of the signer's hand, the direction and amount of light falling on it, the pace of signing etc. are adjusted according to the receiver's visual needs and personal preference. Tactual signing involves signing with the receiver's hand resting lightly on the signer's hand. Tactual signing is suitable for people who have very little vision or no vision at all. Different countries and even different regions in the same country have their own sign languages. In India because of the number of languages and dialects spoken in different states and regions within a state, the variation in sign language is far too much.
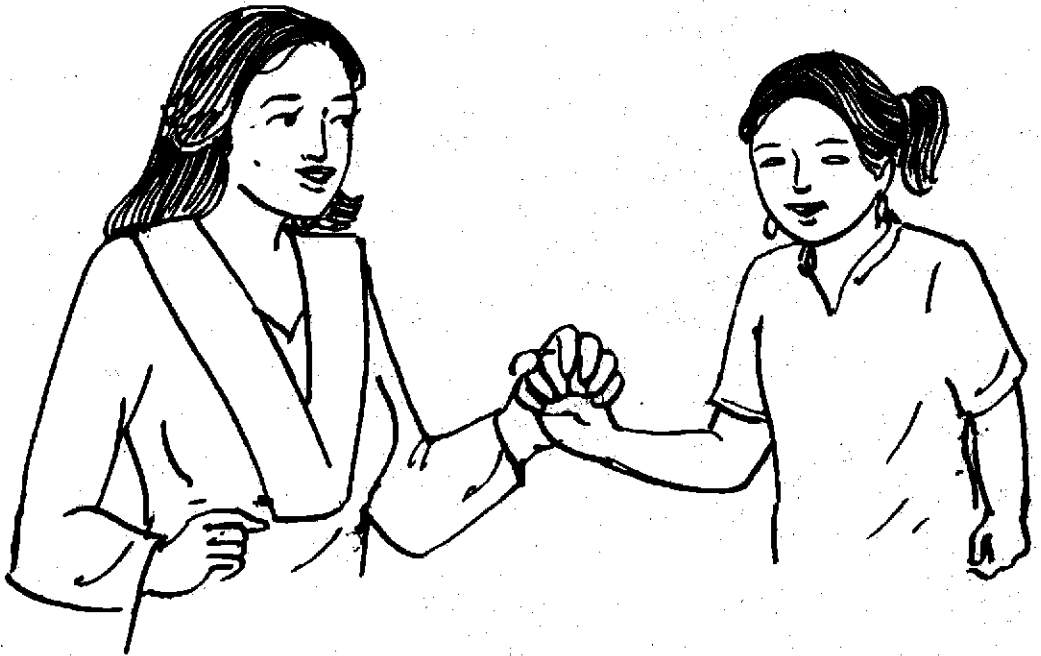
B. Manual alphabet

Manual alphabet involves using a different hand or finger position to represent each letter of the alphabet. Using manual alphabet a

person with deafblindness /visual impairment with additional disabilities can spell out a word through his fingers. Such finger spelling will require a higher level of language skill as it is directly related to reading writing. It is normally used to supplement sign language. When there is no sign for a particular word or the signer is not aware of one then he takes help of finger spelling. Manual alphabet can be received tactually or visually. In tactual one the fingers forming the alphabets are placed in the receiver's palm. Finger spelling too like signs varies from country to country from region to region. Some make use of one hand and some spell with two hands.

2. **Oral Communication** involves expressing ideas and thoughts through speech and understanding speech through hearing and lip-reading. Most people with congenital deafblindness or visual impairment with additional disabilities are not likely to use speech as their primary mode of communication. However for people with good functional hearing speech can be useful in providing some amount of information. A child, for example may not understand most of the spoken, words but he may understand a few words like his own name, which he hears repeatedly through the day. Or he may understand the intonation pattern or the rhythm of speech which may convey some message to him.

    Similarly a child may not learn to produce speech himself due to cognitive or physical challenges he faces but he may develop some understanding of speech. So he may use speech to some extent at least, for receptive communication and signing for expressive

communication. **It is therefore always advisable to use speech even if the child is using signing as his primary mode of communication.**

Lip-reading can also be tactile or visual. Tactile lip-reading involves placing the receiver's hand on the speaker's face and throat. This technique of receiving speech is known as Tadoma Method. Tadoma again cannot be used as the primary mode of receptive communication as it provides only parts of information and that too inaccurately at times. It is often used as a tool for teaching speech to deafblind people. Visual lip-reading requires very good functional vision and hearing as well as high level of cognitive abilities. It is normally used for supplementing the information received through other modes of communication.
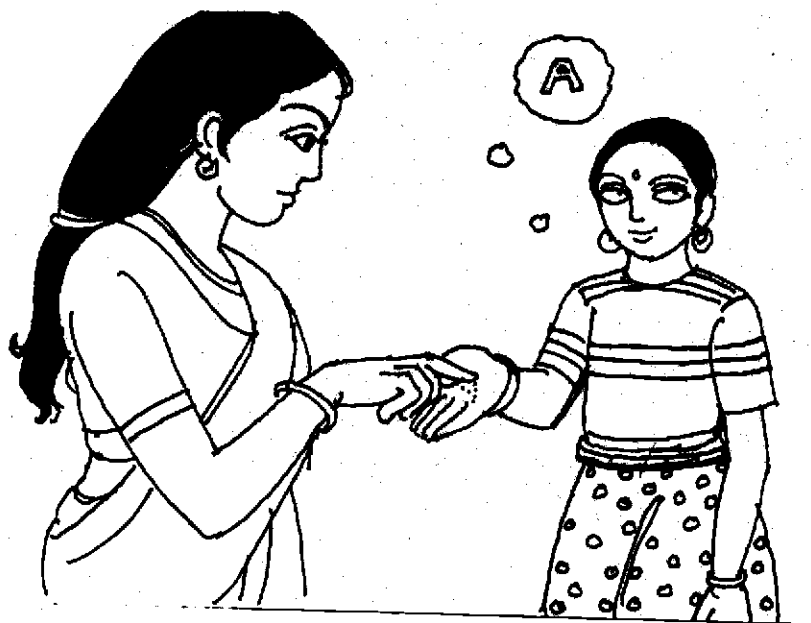
3. **Reading and Writing** – Refer to next module.

4. **Palm Printing** involves printing in block letters on the palm of the receiver using the index finger. Reading –writing is thus the prerequisite for using this mode. It is often used by people with deafblindness when they are out in community interacting with people who do not know signing.

Points to remember :

1. Children with deafblindness/ visual impairment with additional disabilities need special modes of communication when they start using formal language.

2. Sign language and finger spelling are the two principal modes of language based communication that can be used by people with deafblindness/visual impairment with additional disabilities.

3. Speech although seldom used by a deafblind person as the primary mode of communication often provides some amount of information. It is therefore advisable to speak while you sign.

B. How do you build up first vocabulary for a deafblind child?

Discussion: What are the indicators of the child's readiness for signing? Think of the level at which a child with vision and hearing is when he first starts speaking.

What kind of words do we first include in his vocabulary?

- Words that are motivating to the child as they have special significance for him e.g. mama, milk, names of toys, food people he likes.

- Words that are meaningful in daily life and represent routine activities like bath, eat, put on shoes etc.

- Words that are repeated through the day during conversation about various things e.g. give, yes, good, finished, wait, bye-bye etc.

- Words that express emotions and feelings like happy, pain, angry etc.

How many words do we begin with?

Select a moderate number of signs in the beginning- not just a few, not too many. Using very few signs will not provide the child with enough exposure to words and too many are likely to overwhelm him. Moreover he may be ready to understand many words but not to use them himself. So his **receptive vocabulary may include many more words than his expressive vocabulary.**

Certain considerations regarding the use of this vocabulary :

- A child needs many exposures to each word before he actually starts signing it. Sighted hearing children hear a word hundreds of times before they start using it themselves. So sign each word that is a part of his vocabulary often in natural situation.

- Start with only the key word signs, and sign them clearly to him.
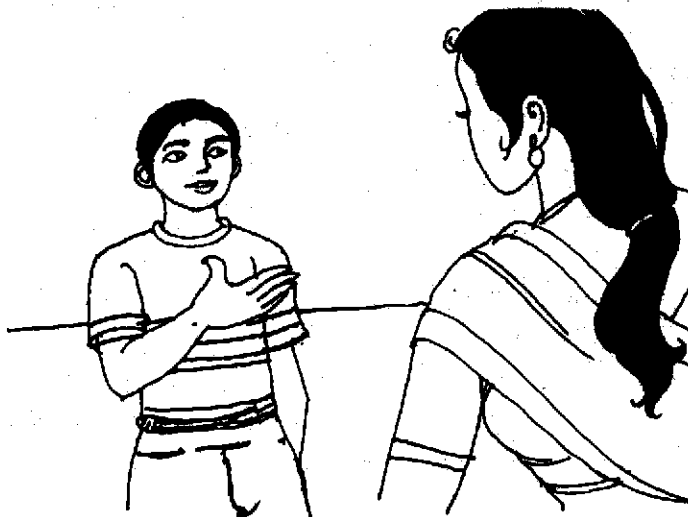
- In the beginning the child's signing may be a little clumsy and not completely accurate. You must accept these approximate signs respond to them and help him improve upon them slowly.

- Keep the child's motor limitation- if any – in mind. It may be difficult for such a child to make certain signs. So accept the approximate ones or adapt these signs according to the individual. child's convenience.

- Ensure that the child understands the meaning of the signs he is making and not merely copying you. If the child tends to simply imitate you then he will not be able to use it himself.

- Remember that all children may not be good signers and for some children signing may not be an appropriate option as a mode of communication because of the cognitive or motor challenges they face.

How do we expand this basic vocabulary?

A few strategies -

- Create opportunities for new and interesting experiences- indoors and outdoors.

- Make the happenings in the environment and conversation of others accessible to him by involving him in them.

- Involve the child in the entire process of an event e.g. before eating he must know that the food comes from the kitchen.

- Have a spontaneous conversation with the child about any situation arising naturally for e.g. some body falls near you or your umbrella flies away because of strong wind while you are walking with him. Show him what has happened; involve him in helping that person get up or in picking up the umbrella from the ground.

- Start introducing abstract concepts slowly like happiness, likes-dislikes and time in the context of real life situations.

- Encourage him to play with his peers and have conversation with others around – other staff members, his school bus driver, people working in the kitchen or in the garden, neighbours at home and so on.

- Involve him in drama, enacting a story you have told him, drawing, craft work, clay work and so on. All these activities give him opportunities to learn new concepts and acquire new language.
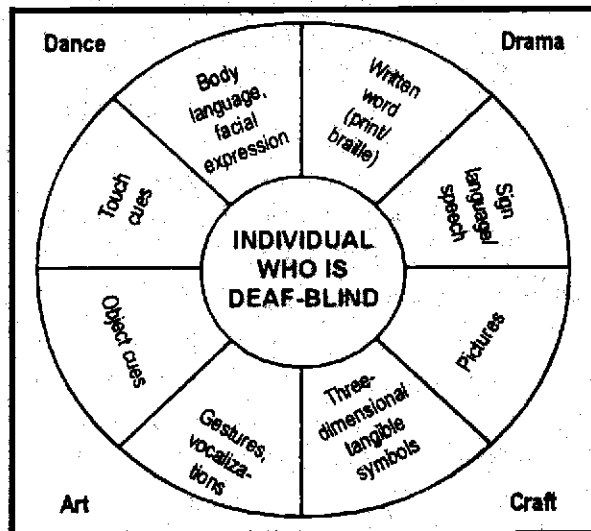
C. **Using multiple modes/ levels of communication :**

- Respond at the child's non lingual level but also model language based forms of communication – If the child asks for a ball by pointing towards it, acknowledge his request and get the ball for him but first say "Want ball?" signing " ball" to him. If he is totally blind then place your hands under his and sign. Similarly if in the middle of a rocking game you stop and the child makes a rocking

movement to indicate that he wants more, then sign " more?" before starting the game again. This will expose the child to signs while he is still at the preverbal stage and prepare him for using them in future.

- Encourage the child to use as many modes of communication as he can Using a combination of modes both at receptive and expressive level enables the child to communicate much more about a larger number of things. The child might have learnt to sign a few words but he still needs to continue using body language, gestures, objects etc. You can also teach him to make use of pictures and encourage him to draw, paint, dance etc. All these are forms of expression and together help the child to convey many things about his needs, desires, likes dislikes etc.

Points to remember :

1. The first vocabulary of a child with deafblindness/ visual impairment with additional disabilities should include words that are meaningful and motivating to the child and the words that are repeated frequently through the day.

2. We should start with a moderate number of words.

3. The child needs to be exposed to these words many times before you can start expecting him to use them himself.

4. A variety of experiences, accessibility to environment, frequent conversation with peers and significant others and involvement in creative activities like drama & art are some of the factors that help in vocabulary expansion.

Activities :

1. Ask for 5 volunteers. Give them some time (may be during lunch time) to think about a 5 min. long drama, skit or narration. After their presentation have a discussion about the various modes of communication used by them and how a similar practice could widen the scope for communication in case of children too.

2. Divide the group into smaller units. Each group will receive a topic regarding an event which might take place in any child's life e.g. buying a pair of new shoes. The group has to narrate the experience in a simple manner using a few words.

Application question :

What specific suggestion will you give to the teachers and parents in your program for building up first vocabulary of your 3-7 years old students?

References :

1. Remarkable Conversation by Barbara Miles & Marianne Riggio.

2. Understanding Deafblindness
   Issues, Perspectives & Strategies – Volume 1, Ski Hi Institute.

USING TANGIBLE SYMBOLS TO ENHANCE COMMUNICATION

- Sampada Shevde

In this module you will learn about :

- The different modes of communication
- What is a calendar system
- How to design a calendar system
- How can we use it with children with Deafblindness and VI with Additional Disabilities.
- How can objects be used to enhance communication

As we have already seen before, every child with Deafblindness and Visual Impairment with Additional disabilities is unique. Each child communicates in a different manner. Similarly, the communication needs of each student will be different.

When we select a communication mode for the student, it will be based on his/her needs.

We know that every child communicates in his/her way. However we, as teachers need to add to the child's communication, by adding to the modes or ways he/she uses to communicate. This can be done by using objects, pictures, photographs or symbols to support or supplement the student's communication.

Most of the students with Deafblindness and VI with Additional Disabilities use different modes for receiving information and different ones for expressing information. A student may use sign language to receive information, and picture and pointing to express. According to the situation, one mode may also be used more than the other. However, it is important to remember that no one particular mode is more important than the other and their use depends entirely on the student's needs and the situation.
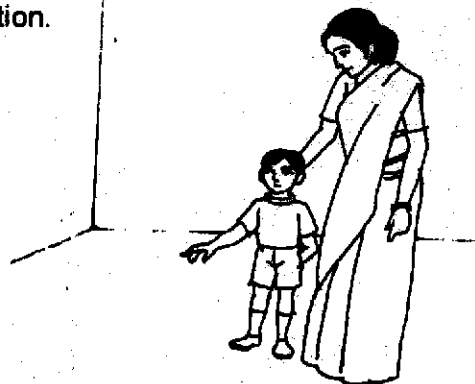
As teachers, it is important for us to know all the communication modes and systems, which can be used as a means of developing communication with your students. You can then select the different modes to be used and developed in your planning.
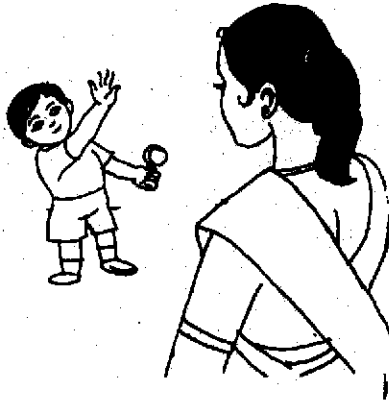
What is Aided and Unaided Communication?

Communication can be divided into Aided and Unaided.

Unaided communication does not require anything more than the student himself/herself. It includes.

- Vocalization.
- Speech.
- Gestures.
- Sign language.

Aided forms of communication requires something more beyond one's own body, such as

- Equipment – brailler or slate for Braille.
- Paper and pen to write or draw.
- Photographs or pictures used for communication.
- Different symbols or objects, which are used for communication.
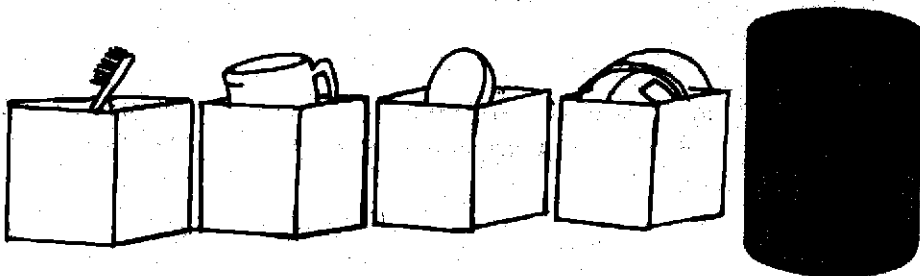
Both the aided as well as unaided forms of communication can be used for expressive as well as receptive communication.

It is important to remember here that although it is comparatively easier to work on the aided forms of communication, we should not rely only on them. We also have to work towards developing unaided forms of communication; or teach the child alternate ways of communicating when it is not possible for them to use the aided forms.

For example you have a student who uses different symbols to communicate. He has a set of symbols to indicate his basic needs of hunger and thirst. When he uses a particular symbol, you give him a glass of water. The child needs to interact with a variety of people at different levels. Suppose one day he has to interact with a person who does not understand the meaning of the symbols he uses. How does he then ask for water? In that case you need to have taught him an alternate gesture for drink or for him to point towards the mouth, to indicate that he wants water. Thus, it is important to remember to use sign language along with the symbols all the time. We can never use symbols in isolation, as the only means of communication for the child.

However it is important to remember that not all children with Deafblindness and Visual Impairment with Additional Disabilities are able to use sign language and finger spelling as their primary mode of communication. Sign language is an abstract form of communication and requires the deafblind learner to have good tactile discrimination skills and the cognitive ability to associate an abstract sign with the word for which it stands.

Some children with Deafblindness and Visual Impairment with Additional Disabilities also have other associated problems like Mental Retardation, Cerebral Palsy, Autism, etc. and therefore are unable to use sign language with fluency. Some children with Deafblindness and Visual Impairment with Additional Disabilities may have lots of problems in receiving and expressing information, through sign language.

For all these children the use of object symbols may enable them to communicate and interact with a variety of people.

Tangible Symbol Systems

What are tangible symbols?

Tangible symbols are objects or pictures that stand for or represent something about which we need to communicate. Tangible symbols may be:

1) Whole Objects
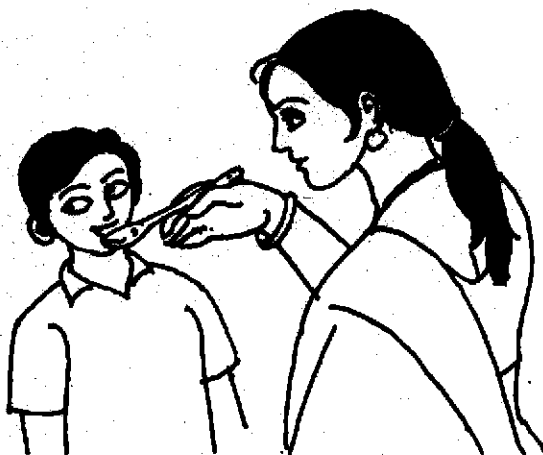
Objects cues refer to objects, which are a part of the activity the student is doing. The same objects are shown or given to the student as a cue for the particular activity. For example showing the student the spoon before he starts eating.

The purpose of using object cues is basically to give the student information about the activity, about to happen.

For example, every time the teacher has to give an oil massage to the young baby with Deafblindness and Visual Impairment with Additional Disabilities, the teacher shows him or helps him touch the bottle of oil. The moment he touches the oil bottle he knows hat now his teacher will massage him. Every time the baby has to be given a massage the teacher shows him the bottle of oil. This is done consistently every time before the massage activity.
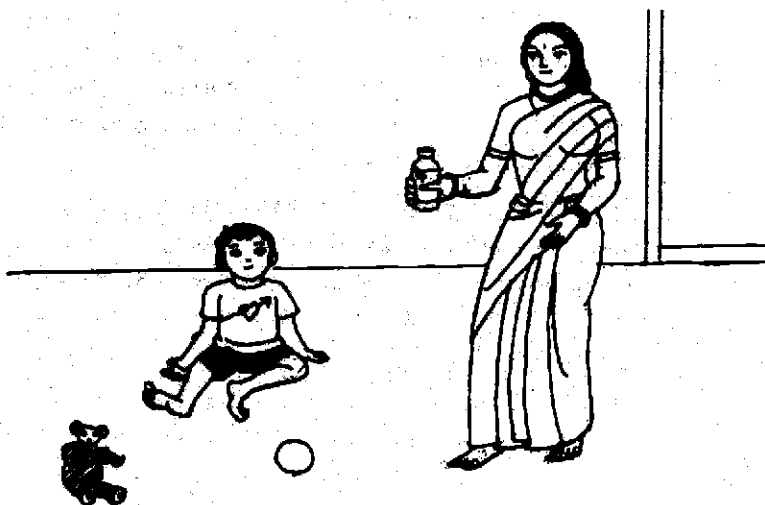
This helps the baby feel more secure as he knows what will happen next.

Most of the children use objects naturally as a part of their daily interactions. For example, when the baby sees the mother coming to him with a bottle of milk, he understands, he will be fed. A small child may bang the empty cup on the table to indicate, that he wants more milk or water.

Similarly, a child who has Deafblindness and Visual Impairment with Additional Disabilities may also make use of objects for communication. He might bang on the ball, to indicate that he wants to play with it, or he might go and show his shoes to indicate that he wants to go out.
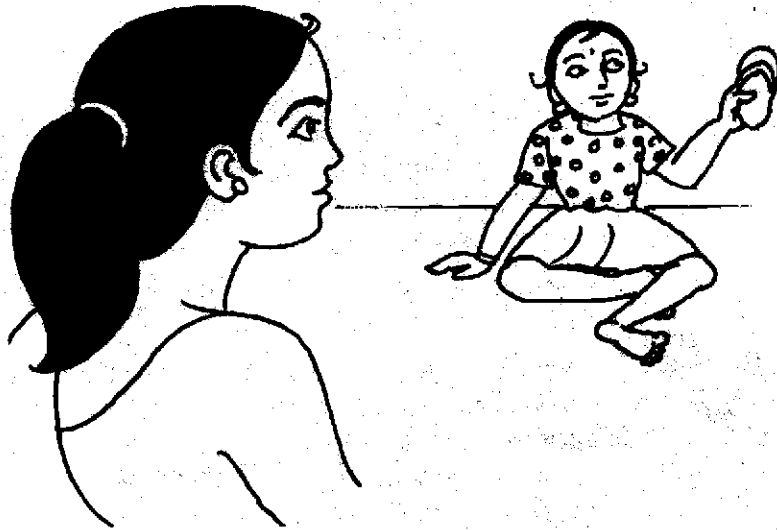
When we use objects for developing communication with children with Deafblindness and Visual Impairment with Additional Disabilities; it becomes much easier for them, as they can actually touch and feel the object, and it makes a lot of sense to them because it is concrete. Hence the conversations we have using concrete objects, are more meaningful to the children.

However it is essential to remember that when the teacher uses objects with the student, they always have to be used along with other forms of communication, such as speech and sign language, as we do not use any mode/form of communication in isolation.

Actual Object : In the beginning the object cue should be the actual one. In the example mentioned above, using the bottle for massage is an example of using the actual object as an object cue.

Understanding the actual object is much easier, as it is used consistently in the activity and helps the student form an association.

Partial Object Cues : When the student understands the activity after seeing the actual object, you could then reduce the size of the object. In the example of massage, you could use a small bottle of the same oil, instead of full bottle, once the child understands that it is time for massage by seeing the full bottle.

Using partial object cues, make the objects more portable and easier to carry.
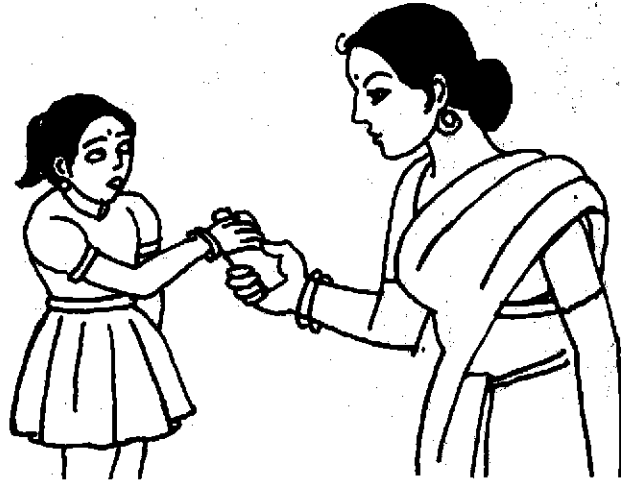
Associated Objects : These refer to objects, which are not directly a part of the activity, but are related to it, in an indirect way.

For e.g. when the student goes for shopping, shopping could either be represented by a shopping bag, which is a part of the activity, or a bus ticket, as the student needs to take the bus to go to the shop. Thus, the bus ticket becomes an associated object.

Pictures or photographs: If the children have good residual vision, then the teacher can also use photographs or pictures representing the shopping activity. The child would only look at the photograph and would understand that it is time for shopping.
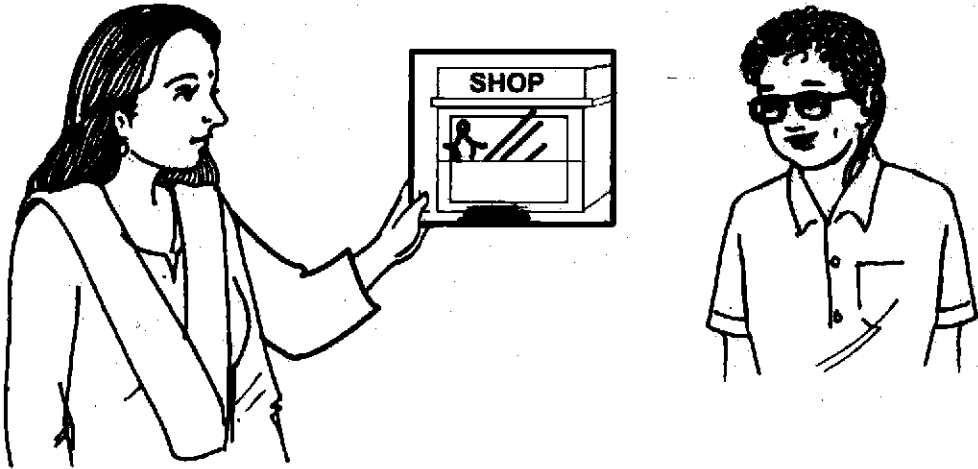
How do we begin?

When we decide to use tangible symbols, it is important to know if the child is making any attempt to communicate with someone. It is important to know whether the child has an understanding that his behaviours will bring about or influence or some change in the environment. If the child does not show the empty cup to the teacher to ask for more water then we cannot expect the child to pick up a symbol for water and show the teacher.
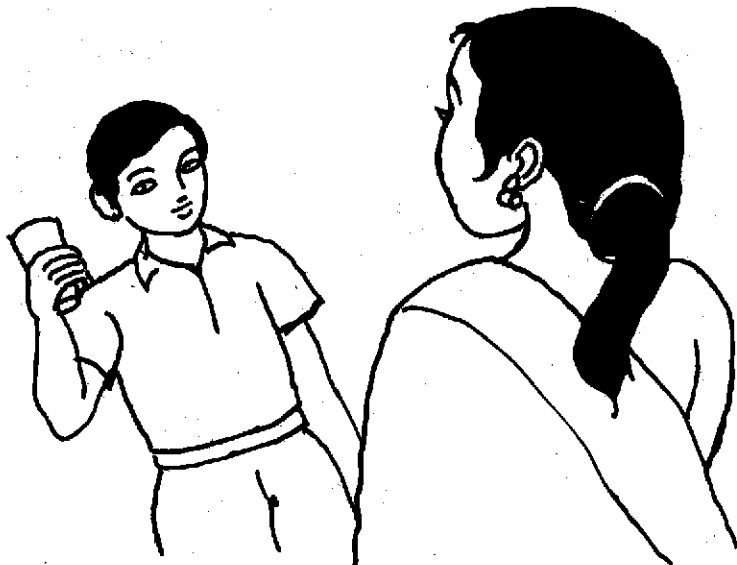
The student needs to understand that he can communicate his needs or wants to other people using objects.

You might see different behaviours in the child through which he is expressing himself with the intention of communicating with another person. He might push away the plate of food or the toys he is playing with to indicate he has had enough; he might cry to indicate he does not like the activity; he might smile to indicate that he likes the activity.

It is important here for you to note, whether the child knows that by pushing away the materials he will not have to continue the activity. Does the child, with an intention to discontinue the activity, do the behaviour purposefully?

How do we decide, how to start?

When we use symbols with a student it is necessary that the student uses the symbols to request something that he wants if the student is not interested in that particular activity or does not like that particular object, he will not be motivated to use that symbol and ask for it.

Therefore, when you begin, always select a favourite activity or object, which the child likes, so that he is motivated to use the symbols and forms the association.

What type of symbol is appropriate?

Always start with the level of representation that the individual can understand. If the student is at the level, where he can only understand by the actual object or the real object, then the symbols to be used with him have to be the actual objects representing the activity.

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What behaviors will the individual use to select a symbol?

This response depends on the learner's fine motor skills and visual abilities as well on the ability to elicit another's attention. For example, will the learner respond by pointing to or touching a symbol, or by handing a symbol to the teacher? The expected behavior should be thought of before and should be one which is easy for the student to use.

Constructing Tangible Symbols

Tangible symbols are different for every student. Two students may use different symbols to represent the same activity. For e.g. one child may have the symbol of a brush to represent brushing, while another child may have the symbol of a small napkin, which he always uses to wipe his mouth after brushing.

Therefore you cannot have a set of symbols representing different activities, made beforehand, to be used with different students.

As we already know, the communication needs of each student are different. So the symbols used with each child will be different.

Three-dimensional Symbols

Three-dimensional symbols may be identical objects, parts of objects or associated object (such as a straw for "drink"). Suppose you're deciding how to make a 3 dimensional symbol for a particular toy that a child highly prefers. Pay attention to how the child plays with it. What does he focus on? Does he hold the toy by the handle? Does he pull the string or push down on the lever to activate it? Is he focused on the red arrow that spins?

By making a symbol that is similar to the features of the toy that the child focuses on, you create a symbol that is immediately meaningful to him. For e.g. handle bar grip might make a good symbol for a bicycle.
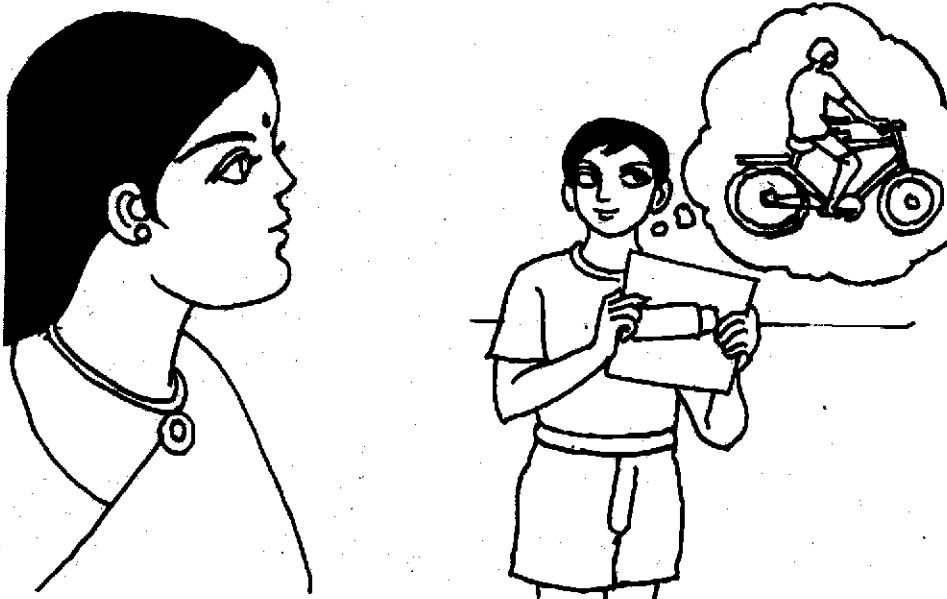
Pictures drawn, printed or photographs are another mode of communication. They can be simple, clear photographs of actual objects or people, drawn or printed pictures, outlined pictures symbolizing places & events or story pictures. They can be used in many ways: spontaneous communication, as a daily schedule, as a way to indicate a choice, as identification of people or places, etc.

How do we know if the child understands the meaning of the tangible symbol?

When communicating verbally, it is a simple task to check the user's comprehension of a new symbol. We can easily ask "Do you understand me?" and the answer can be "yes" or "no". It is not as easy to determine whether an individual really understands the meaning of a tangible symbol, since he cannot talk about it. Therefore, we always make a point to check if the student understands the meaning of the symbol for each and every new symbol. This has to be included in the routine of the child itself. Essentially, this means that each time the learner uses a tangible symbol; he or she must also indicate what it stands for.

Promoting Progress

The ability to communicate is a constantly developing skill. One key to promoting steady progress is to regularly record the learner's performance. Whenever you find that the child has fully learnt about the routine of a particular set of symbols, we have to change it systematically to ensure continued progress. There are different changes you could make that may promote progress.

The first and most important change is to **expand the learner's vocabulary.** As soon as the child has acquired one set of symbols, introduce more. Give the user the power to communicate symbolically about as many topics as possible.

Another step in targeting progress is to **increase the size of the display of symbols.** Generally a learner starts out using only one symbol at a time. Using a single symbol requires no discrimination, but does teach the learner what to do with a symbol. Upon the addition of a second symbol to the display, the learner beings to discriminate between symbols. Gradually increase the number of symbols available to the learner in the symbol display. The more vocabulary presented to the learner at once, the more efficiently he will be able to communicate.

Once a learner understands how to use a set of symbols under carefully controlled conditions, show her that the symbols can be used in other settings, such as at home, in the community, with other people, and at other times of the day. Make sure that the use of symbols **generalizes to any appropriate context.**

Once the fundamentals of communicating through Tangible Symbols have been acquired, encourage the learner to use symbols for **different communicative functions.** Generally learners start by using symbols to make requests or to make choices of items that they enjoy. Once learners have learnt to use them efficiently for this purpose, show them how to use symbols for other communicative purposes, such as labeling or making comments or asking questions.

Another approach to increasing the complexity of symbol use is to progress from single-symbol utterances to multi-symbol utterances. It is possible to chain tangible symbols together into simple phrases, just as it is possible to chain words together.

Tangible symbols must be available whenever they might be needed. Accessible symbols are more likely to be used by the learner. If a learner does not have constant access to her symbols, she will not be able to communicate whenever she wants to. Unfortunately some symbols may be large or difficult to carry from place to place. Once a learner has understood how to use one type of symbol, think about how to **make the symbols more** portable by making them smaller, lighter, or placing them in a permanent display such as a book that can be easily carried.

The final area of targeting progress involves changing to a more **conventional type** of symbol. Although it is more critical to teach a learner to communicate competently and spontaneously with a large vocabulary, teaching the use of more abstract symbols is one method of continuing progress.

Use of Objects in Calendar Systems :

What do we mean by a Calendar System?

All of us use a calendar system in our day-to-day life. Think about what kind of a calendar system do we use? Does it help you in any way? In what way does it help you?

All of us have our own calendars. Similarly, students with Deafblindness also need a calendar system in their day-to-day life, to help them know about the different events and activities that are going to happen during the day, week or month.

For children with Deafblindness and Visual Impairment with Additional Disabilities, the calendar may be represented by placing the objects or pictures representing separate activities in separate compartments or boxes.

For representing the different activities, real objects could be used. Sometimes our photographs or pictures could be used depending upon the needs of the student and his daily schedule.

Why should we use a calendar system?

- A calendar system helps the student know what is going to happen next.

- It helps the student feel secure as he knows, what to expect

- It helps him decide or choose the activity, he has to participate in

- It also helps him know the change in his schedule if any

- It helps him develop a concept of time (what activity is finished, what is still to be done, what will be done later)

- The different symbols for different activities give an opportunity for communicating with the child, at the beginning of every day

What do we do before we begin?

1. It is important to have set clear goals and objectives for the child in the area of communication

2. You have to know how you want the child to respond. Do you want him to use object cues, do you want him to start a conversation with the symbol, etc.

3. Select the appropriate symbols to represent the different activities. You have to know beforehand what symbol will represent which activity.

How to design the calendar system.

A calendar box may be made of various materials, such as wood, small plastic boxes, or shoeboxes attached to each other. Whatever the material used, the idea is to have series of compartments arranged in a row.
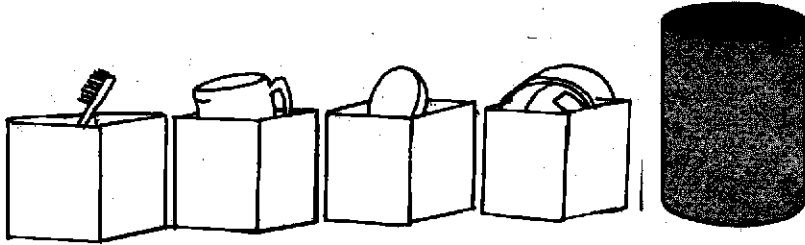
Calendar boxes are used to help students learn to anticipate activities and form a sequence of the day mentally. The following steps are involved:

● Make a list to match up activities with specific objects. Always use the same object to represent a given activity. Use objects that are small enough for the compartments and that represent the activities or are actual parts of the activities, for e.g. a ball to represent gym.

At the beginning of each day, place the objects left to right in the box's compartments and adhere to their sequence as the day progresses.

Either place the box on or close to the student's desk or work area in a particular position or keep it by your desk and place and remove the objects as each of the day's activities occur.

At the start of the day, have the student feel each compartment and object left to right and give each an identifying sign. Go through all the compartments at the beginning.

Then have the student remove the first object; perform the activity; and, when finished, put the object in a "finish box", separate from the entire calendar box. Help the student return to the calendar box, feel the empty compartment, and move to the next compartment to the right.

Try to avoid unanticipated activities, or if you know that there will be an unusual event, place an object that represents the event in one of the compartments.

Anticipation Calendars :

When we begin introducing a calendar system, we don't start right away with a calendar system consisting of 6-7 calendar boxes. We can introduce an anticipation calendar system with a child who has just

begun to have some understanding of the different activities he participates in and who shows some signs of anticipation, e.g. in the dining room when he sits at the table, he reaches out to look for food, or when shown a toothbrush, he takes it towards the mouth. This shows that the child has some memory of the object and knows what is done with it.

Generally we start using an anticipation calendar system when we see that the child has just started understanding the different objects used in different activities, but has no way of requesting or asking for a particular object.

How should the Anticipation calendar be?

We just need two containers to represent the activity that has just finished and the one that is to be started. Thus one container to represent the past and one for the future. These two containers should be different from one another so that the child understands, the difference easily. The difference may be in colour or shape.
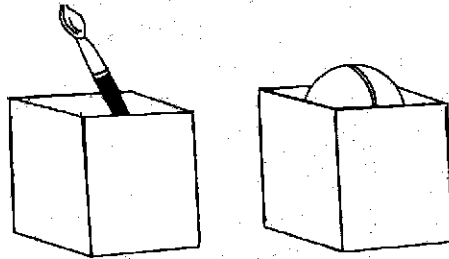
Which objects do we select for the symbols?

To begin with it is important to select an object, which the child clearly identifies as a part of an activity, and the activity should be one that the child enjoys or likes to do. You need to keep in mind that the object is used only in that particular activity and not in any other one. For e.g. a child may be using a mug for toileting as well as bathing. In that case using the mug for any one of these would confuse the child. Thus the symbols selected must be specific to that particular activity and should be used only in that activity.

Things to keep in mind when using the anticipation calendar system :

- Place the calendar system in a separate place and in separate boxes, for the child to use so that he does not think that these are just objects he can play with.

- Give the child enough time to explore the object and understand what it stands for, so that he can remember the object when he uses it in the activity.

- Perform a familiar action with the object, for e.g. Brushing with a toothbrush. This will help the child understand the symbol better because many children remember the action associated with the object.

- When you begin, the object needs to be shown to the child immediately before the beginning of the activity, without too much of a time gap, in between, to allow him to form as association between the object and the activity it represents. Gradually you can increase the time between the presentation of the symbol and the activity.

- After the activity is finished the child will come back and put the object in the finished box.

Thus the routine would be :

1] Showing the object to the child

2] Performing an action with the object

3] Performing the activity immediately

4] When the activity is finished encouraging the child to keep the object in the finished box.

Daily Calendars :

Most of the times the child will start with an anticipation calendar and then move on to the daily calendar.

How should the routine for the daily calendar be?

Specifically, the daily calendar system should have from three to eight compartments, each large enough to accommodate a representational object of each selected activity.

If you run out of compartments, for the activities you have planned for the day, fill the box twice: once for the morning activities and once for the afternoon activities.

The routine for the daily calendar should be done in the same consistent manner each time. An e.g. of a routine might be:

- Find the symbol
- Dialogue about the activity
- Find the materials
- Travel to place
- Complete the activity
- Put materials away
- Carry the symbol back to the calendar
- Discuss the activity that just took place
- Return the calendar symbol to the calendar or finished box and sign as finished

Discussion about the different problems encountered when using tangible systems

- It is difficult to tell what interests your child.
- The child appears to be losing interest in the activity; he's more distracted and less careful in his responding.
- How do you get started? Why would he want to interact with me?
- The child can use his symbols to request, but only if you approach her and ask her what she wants.
- The learner's performance varies from day to day, or even from person to person.

Activities

Activity 1

Select three children who are Deafblind and of different ages (if possible). List the means of communication which:

They **understand:** (to time extent)

They **use**

Activity 2

See an existing communication system, and think about and write down the changes that you would make to that system.

Activity 3

Discuss two case studies and design Augmentative Communication systems for them.

Activity 4

Let the participants in a group design a communication system for their students.

Things to Remember

- Most of the children with Deafblindness and Visual Impairment with Additional Disabilities will require the use of objects for communication.

- Objects should always be used along with the teacher, making use of speech and sign language as well.

- Every student will have different objects representing different activities.

- Give the child enough time to explore and understand the different symbols

- Start by selecting activities that are motivating to the student, when you initially select the symbols.

- Symbols have to be consistently used and in the same way by everyone working with the child.

- You need to continuously think of making the symbols portable as well so that they can be carried to different places.

- Symbols should be kept in such a place that they are always available to the child whenever he wants to communicate.

References :

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2] HAND IN HAND: Essentials of Communication, Orientation & Mobility for your students who are DeafBlind, Vol I, by Kathleen Huebner, Jeanne Pricket, Therese Welch & Elga Joffee, A F B Press, 1995

3] Remarkable Conversations: A guide to developing meaningful communication with education & young adults who are DeafBlind, Barbara Miles & Marianne Riggio, Perkins School for the Blind, 1999

4] Understanding Deafblindness-Issues, Perspectives and Strategies. Vol.I, By Linda Alsop, SKI-HI Institute, Utah State University, Logan, Utah, 2002

LITERACY EXPERIENCES FOR CHILDREN WITH DEAFBLINDNESS

- Reena Bhandari

In this module, you will learn about

- What is literacy.

- How to create a literary rich environment for young children with deafblindness/VI with additional disabilities.

- How to provide exposure to appropriate books for young children with deafblindness/ - Visual impairment with additional disabilities.

- How to select an appropriate reading and writing mode for children with deafblindness/VI with additional disabilities.

A.   What is Literacy?

Literacy in the broadest sense is listening, speaking, reading and writing. It involves the use of language. Reading and writing allows information sharing and increases knowledge of the world around us. It allows us to acquire and share information, ideas and knowledge, stimulates mental activity and keeps us in touch with our environment.

Literacy develops abstract concepts, improves communication, independence, and social interaction, access to information in the environment and improves the quality of life.

Discussion: Think of the different ways reading & writing impacts and improves the quality of our lives. This will be a sharing of ideas session, with points summarized and written on the board.

Early Literacy Experiences

Early literacy experiences build a foundation for later literacy skills. Literacy comes from learned experiences beginning from birth and continuing throughout a person's lifetime.

For the pre-school child, literacy begins with doing what other family members do already; by responding to signs, logos and labels; by sharing books, scribbling notes (Goodman 1986). As an observer and imitator, the young child tries out and practices reading and writing in functional and meaningful play situations. When young children understand why people read and write, literacy begins to take on meaning for them.

What are the components of early literacy experiences?

Early literacy experiences have the following elements:

- Oral language development (listening to words, sentences, language at a slightly higher level for e.g. although a child maybe

at a one or two word level, his parent talks to him in full sentences which may have words that he is not familiar with. This helps to build his language level and takes him to the next stage of language development).

- Read aloud experiences (listening to rhythm, intonation of voice, print/braille to convey a message). This is a very important factor in the reading success of children.

- Interactions with books (enjoying books, understand that symbols have meaning, story comes from the print/braille, awareness of the structure of stories, hearing "book language" as different from conversation, encouraging a desire to read a book, book handling, understanding routines with books).
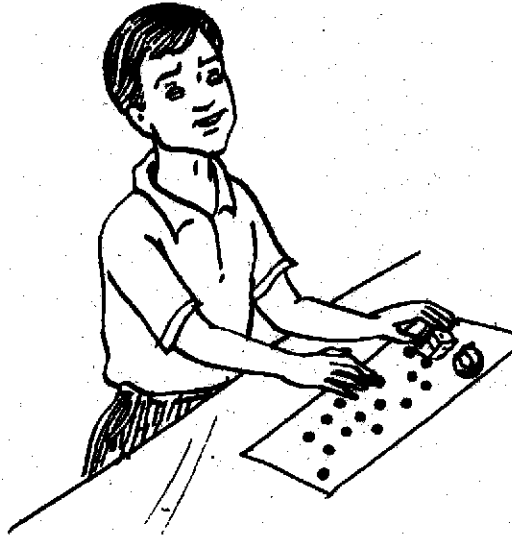
- Exposure to environmental print/braille (labels, signs, directions).

- Observing reading & writing routines —especially family members.
- General experiences with literacy.

Thus, for children to develop early literacy, the following conditions are necessary:

1. The child must observe family members and others reading and writing for a variety of purposes
2. There must be meaningful conversations during the literacy experience
3. The child must have easy access to reading/writing materials
4. The child must be motivated and interested in the literacy experience
5. There must be regular opportunities for the child to use reading & writing materials independently.

Early literacy experiences for children with deafblindness/VI with additional disabilities

Children with deafblindness/VI with additional disabilities face the following challenges:

- Reduced incidental opportunities for language development through observation and listening to people around them.
- Reduced materials in appropriate literacy mode- reading and writing materials may not be accessible.
- Challenges of picture related learning-visually impaired children may have problems in learning through pictures.

- Difficulty obtaining appropriate literacy related equipment. For e.g. visually impaired children may not have easy access to braillers, large print materials, etc.

- Reduced experiences due to added disabilities. The presence of additional disabilities like hearing/vision impairments with cognitive delays, cerebral palsy etc. creates further challenges in reading and writing.

- Lack of appropriate educational intervention. Children with deafblindness/multiple disabilities often do not receive early and appropriate intervention that leads to delays in the acquisition of literacy skills.

Discussion : Children with deafblindness/VI with additional disabilities face many challenges in acquiring language, concepts and reading/ writing skills.

Children with deafblindness /VI with additional disabilities may not be able to read and write like "normal children". Literacy for them may be in different forms and modes.

Depending on the child's sensory, mental and cognitive abilities, literacy may mean that he can learn

- more formal and structured language which may be in print or braille

- He may be able to work on a braille computer or access Internet

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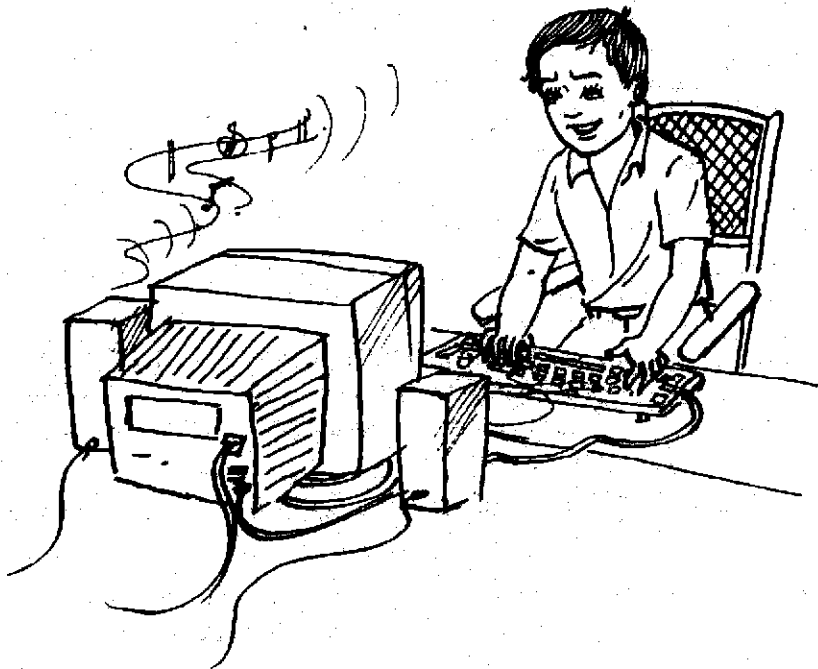
- Or he may only be able to "read" a schedule that consists of objects arranged in the order of events they represent or to point to a picture to express his need, which is a more functional form of literacy.

Literacy expands understanding of the world a child with deafblindness / VI with additional disabilities.

Literacy is as important for a young child with deafblindness/VI with additional disabilities as it is for a child without disabilities. Literacy will provide opportunities for independent decision-making as well as provide choices. The use of picture, print, object or braille allows a child to cook independently and be able to read food labels on food items, which gives him many choices at the store. Some children may learn to recognize road safety signs and read in limited ways. Learning to write or draw in a daily diary will enable the child to express himself and his feelings, communicate about the past, anticipate future events, and expand his understanding of the world.

Things to remember :

1. Literacy is the ability to listen, speak, read and write.

2. Literacy begins early in life right from birth and continues throughout life. It begins with the baby observing family members using literacy skills in day-to-day life. Hence early experiences with literacy through meaningful situations are important for children to develop literacy

3. Children with deafblindness/VI with additional disabilities face many challenges in acquiring literacy.

   Depending on the severity of impairments, literacy for these children may be in different forms and ways.

Literacy is necessary for every child and to be encouraged no matter how severe the disability.

B. How do we create a rich literacy environment for children with deafblindness/VI additional disabilities?

Children with deafblindness/VI with additional disabilities need to be provided with a variety of early literacy experiences just like their sighted and hearing peers do to later prepare them for the world of books.

A deafblind child must be given opportunities for meaningful interactions with different people in his environment. He must have meaningful experiences that involve places, relationships, feelings, actions and imagination. They must have continuous exposure to language and to the conversation of others. For example, Raman who is deafblind accompanies his mother to the market, to visit relatives, to the post office, to restaurants, etc. At all times, his mother provides him with appropriate language. She introduces him to people they meet, and describes situations that he experiences. The language that Raman's mother provides him through experiences that have meaning for him will help Raman in acquiring language and literacy skills.
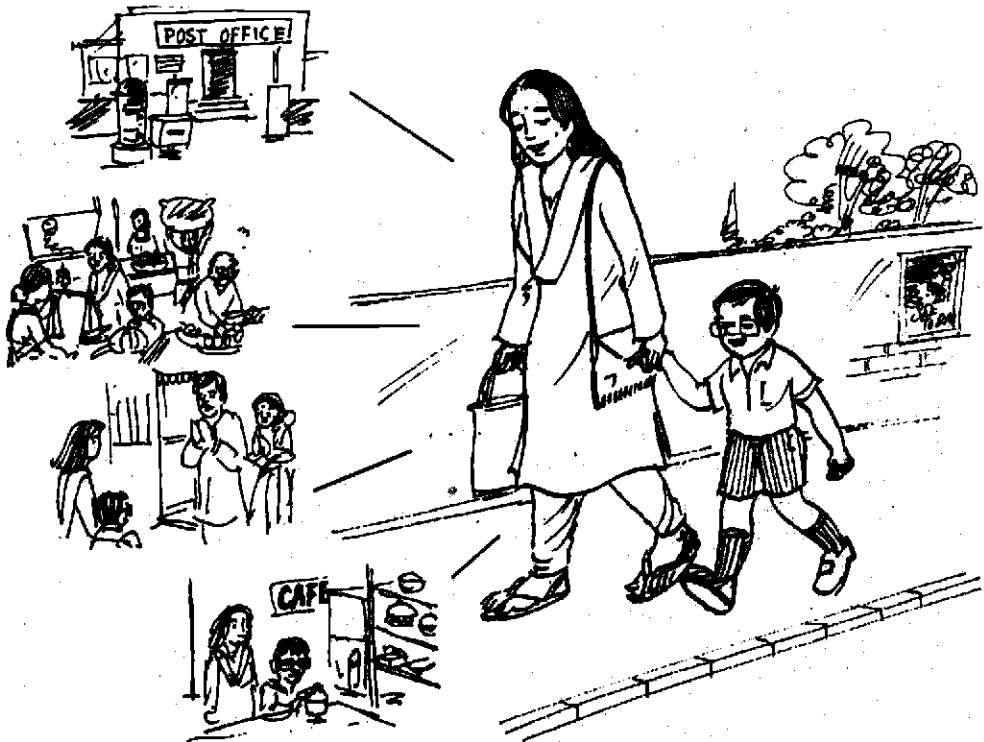
As educators of children with severe disabilities, we must create literacy rich environment- a place where children are constantly exposed to print, made aware of its functions and usefulness.

Early Exposure to Reading and Writing

Children with deafblindness/VI with additional disabilities need constant exposure and access to concept development and language learning. Since these children receive limited and incomplete information about their environment, we need to ensure that we provide as much exposure to language learning as possible. Concrete hands-on experiences with things form a foundation of learning for them. Concepts will only develop through exposure to language provided through natural, meaningful experiences like playing, cooking, shopping, and traveling. The child needs to explore things that motivate him. We need to help the child understand his experiences, and with time help him develop abstract concepts for e.g. point out familiar/unfamiliar features, relate new experiences to familiar ones, and help the child anticipate what may be expected in various surroundings.
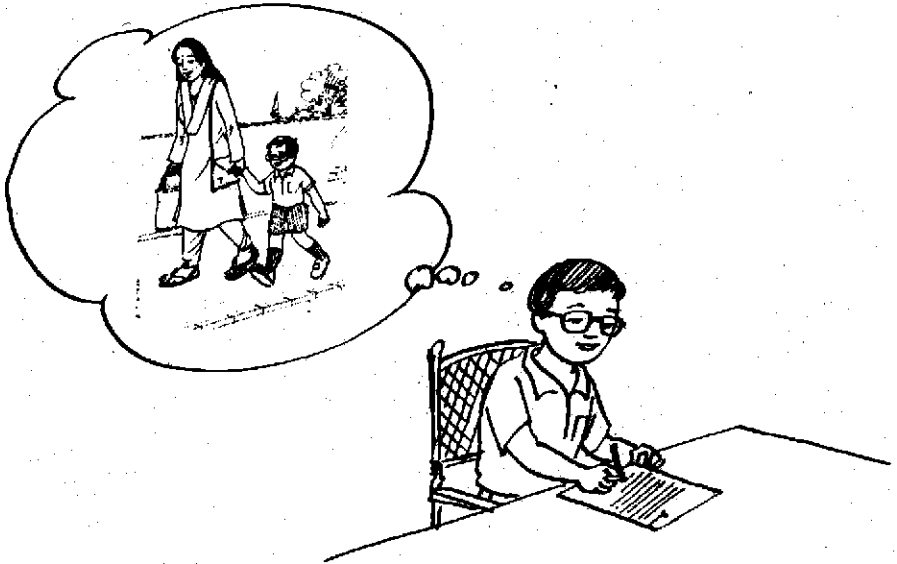
For e.g. Senju, 6 years old, has deafblindness with useful vision. He loves playing with cars. Senju's teacher, therefore, decides to expand Senju's concept of cars. She introduces him to various cars. Senju learns about different cars and models. Both Senju and his teacher experience riding in real cars, and writing experience based stories on them. Senju tries to draw different cars that he has seen. Senju's teacher makes some interesting books on cars with him. She encourages him to look at books on cars and exposes him to large print. Thus he is encouraged to learn more about cars. With time, his teacher will add on to Senju's concepts on cars and expose him to different transport vehicles. Senju will also learn about people who drive these vehicles. Thus Senju's concepts about people & his environment will continue to grow and expand. He will continue to build on previous information and concepts that he has acquired.

We can expose children to language & reading and writing in the following ways:

a. Read aloud and provide early experiences with books

1. Provide language-rich activities, materials, and environments to support a child's experiences with literacy. These include playing together, describing objects, discussing events, supporting the child's access to language conversations, stories and books.
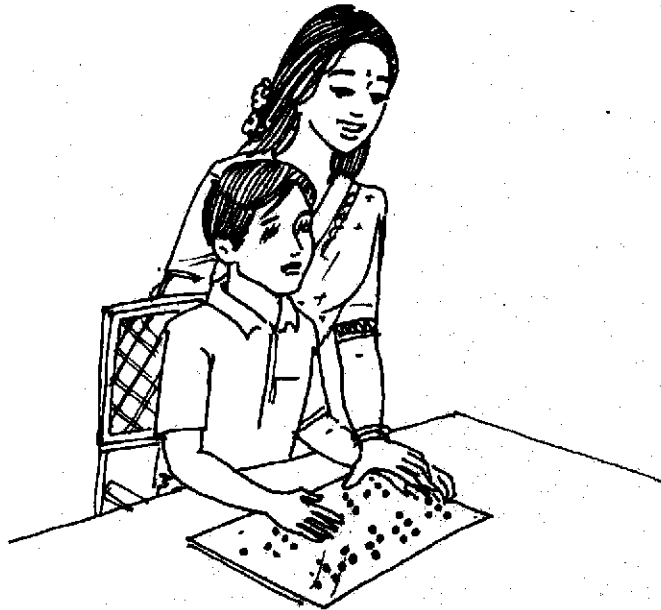
2. As appropriate, use varied intonation, gestures, signs, objects and tactile items to engage the child in a conversation or story. Since one cannot be sure whether a particular child will be a reader of print or braille or a listener of stories on tape or in voice, they need early exposure to all three mediums.

3. Young children with useful vision need books with simple, bold pictures, few words, and larger print.

4. Young children with little or no vision need to be exposed to books with tactual features and braille as well as the large print and pictures. The braille words are directly under the printed words and usually double-spaced.

5. Build on real experiences that children enjoy as a beginning point for literacy experiences by referring to tactile items associated with these experiences. These tactile items should be organized in a "story or memory" box or book so that the child can refer to events and "reread" these stories.

6. Expose the child to braille in a similar manner that young children are exposed to print, e.g., on labels. The child should feel the braille even though the child may not be able to read this abstract symbol system. Through repeated and consistent exposure, the child will give meaning to these dots.
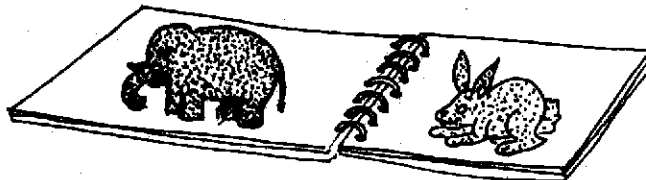
7. Read familiar, interesting, and relevant books repeatedly with the child. Bring in pictures, newspapers and magazines to share & read with the child.

8. Ask the child to "read" a favourite book to you by touching tactile items in sequence and using gestures or other means of communication.

9. Provide opportunities for interaction. Pause during the story and wait for the child to feel tactile items and the braille, and to comment or anticipate what happens next. Allow the child to hold the book, turn the pages, and feel tactile features. If needed, add tabs to pages to make them easier to turn. Help the child understand which is the front/back of the book, and look for words/a picture/ texture on top, bottom, middle of page and later on left and right of the book in fun ways.

10. Have the child participate in the development of tactile books and displays using items that represent favourite activities or experiences.

11. Whenever possible, help the child make connections between these experiences stories and current or upcoming events.

12. As the child gains greater understanding of different literary experiences, more abstract methods of representation can be used.

13. Let children experiment and play with braillers as a form of self-expression.

b. Early Exposure to Writing :

1. Let young children become aware of how you use writing- e.g. when you make a list of things to do, let the child observe you or put his hand on your pen as you write. Say aloud what you are writing.

2. Sometimes, use the pen to poke holes in a piece of paper placed on a small piece of carpet material. Turn it over and let the young child feel the bumps made as you say what you pretended to write.

3. Give the child a writing tool and paper and let him scribble his own list of things he wants from the shop. If the child has vision, let him scribble with crayon, marker, pen or pencil. If the child has little or no vision, encourage him to "write" with a stylus, or pen to make dots. The child can also use perfumed crayons or markers, and you can place a textured material under the paper so he can feel the texture of the crayons.
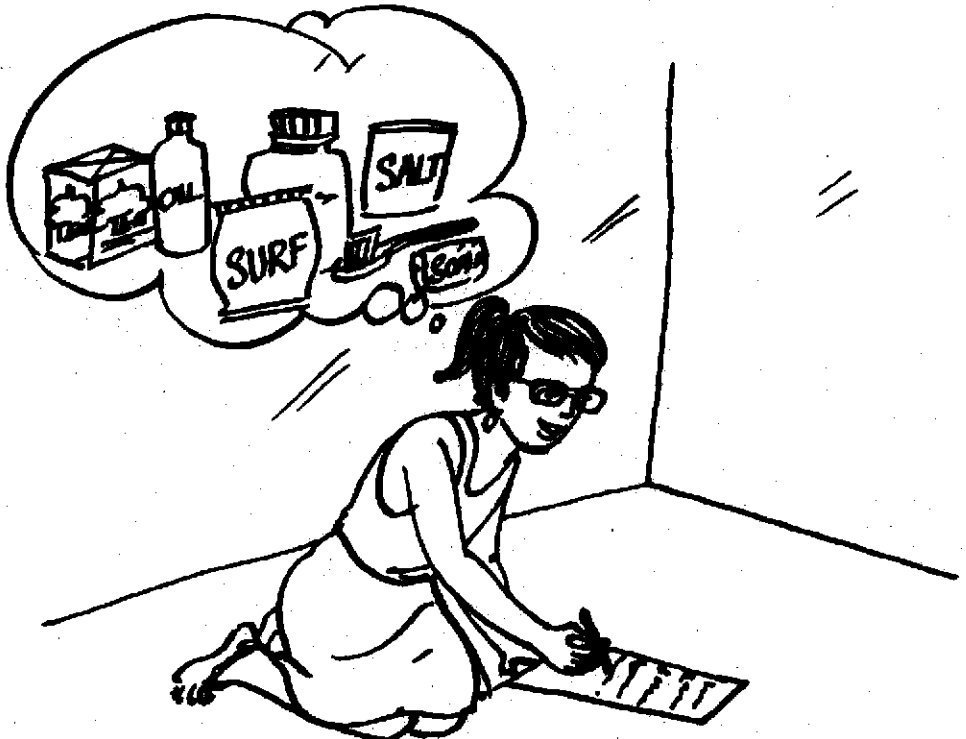
4. Draw pictures of things in the child's experience.

5. When cooking, point out the recipe book you are reading from. Read the recipe out loud.

6. When you are writing, encourage the child to share the experience. When working on the computer, let the child feel the keys and watch the screen.

7. Use a brailler to write things. Let the child feel as you use it, explore it, push on the keys.

We can share with them our own reading and writing experiences and make materials available to them. We can encourage self-expression with gesture, clay, scribbling, braille, writing- whatever forms the child can use. We can view every interaction with a deafblind child as an opportunity for literacy- we can use an object from the experience, we can write a story about the experience along with the child, we can draw a picture, or we can write an e-mail or letter to them.

c. Marking things in the environment :

1. Provide hands-on, concrete experiences with objects that he uses, e.g. milk bottle, biscuits. (E.g. looking for the biscuit tin, holding it, removing biscuit, eating it, and closing the tin).

2. Encourage the child to find the biscuit tin, etc. by putting a texture cue on the outside of the box. Help him feel the texture cue on the box to before opening it to take out a biscuit.

3. Use objects/sound/texture/smell cues to prepare the child for symbol representation. Show the child how to feel/look at/listen to familiar toys, books and objects.

4. If the child is blind, put a texture cue on the cover of his favourite book to help him identify it.

5. Mark the child's belongings with print and braille. (E.g. his bag, chair, cupboard, etc.)
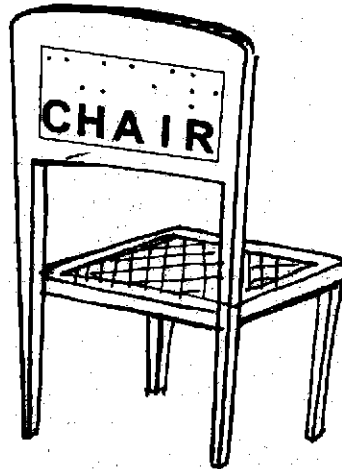
6. Mark the child's toothbrush, towel with some textured materials.

7. Mark furniture and mobility routes in the child's environment with objects/pictures/print/braille.

In summary, children with deafblindness/VI with additional disabilities need access to language and experience. Language teaching must be based on multiple experiences that will help the child understand the meaning of words that he is learning to use. Materials used for language must be real, touchable things that the child can use. Multi-sensory cues can be used to encourage the child to acquire concepts and language.

Things to Remember :

1. For children with deafblindness/VI with additional disabilities, literacy may be in different modes and forms. Some may learn to read and write print/braille, and learn to work on computers and Internet. Others may learn to "read" object/picture communication systems that increase their level of independence and provide them with choices.

2. We can create a rich literacy environment by providing meaningful experiences that are linked to language and concept development. Young children are exposed to reading and writing through observation and imitation of role models in day- to- day activities.

3. As young children grow in an environment that encourages communication, language development and interaction through experience writing, story telling, diary writing, braille and imaginative play, they begin to enjoy the fruits of literacy.

4. In order to make books accessible to children with deafblindness/ VI with additional disabilities, we need to make adaptations. Books need to have clear, bright pictures, have both print and braille written forms, and also have tactual features.

Getting children ready for more formal reading and writing
Reading :

Reading is based on language, and language is based on concepts developed from interactions with people and the environment. Part of that interaction is spoken or signed language – sharing ideas about the environment and naming objects, people and abstract concepts like feelings. As the child begins to make sense of the written word, his language expands and he begins to read for both information and pleasure.

A child's beginning reading vocabulary includes his name, names of people in his life and objects and his possessions. By the time children are ready to read and write they will have already acquired a great deal of receptive language. Children with deafblindness/VI additional disabilities also needs to have been exposed to language and conversational interactions before we expect them to be able to read and write.

After a child begins to read single words through repeated exposure in meaningful situations, his reading vocabulary can be expanded to include his day-to day activities and names of his favourite objects and activities. His possessions and environment can be labeled with motivating and interesting words.

Language and concepts can be taught and expanded very effectively through the Unit-Based Approach. A Unit-Based Approach uses a central theme to teach all subjects and language. It is an integrated way of teaching and linking subject matter and encouraging reading in children. For e.g. if the theme is "Transport", then all the language and concepts taught to the child in that month will be on different transport. How they work (science), people who work them (social studies), math problems on transport, drawing/making transport models (art/craft), songs on transport, and so on.

Simple picture storybooks that are visual/tactile, and have single words on each page is a good way to encourage reading. As the child's language grows, more complex storybooks can be used for story telling as well as reading. Teacher made books, charts, storybooks and experience stories made with the children are the best way to teach children language, concepts and reading.

For children who are at the object or picture reading level, the teacher gradually fades away the objects and pictures and substitutes them with the print form as the child's competencies increase.
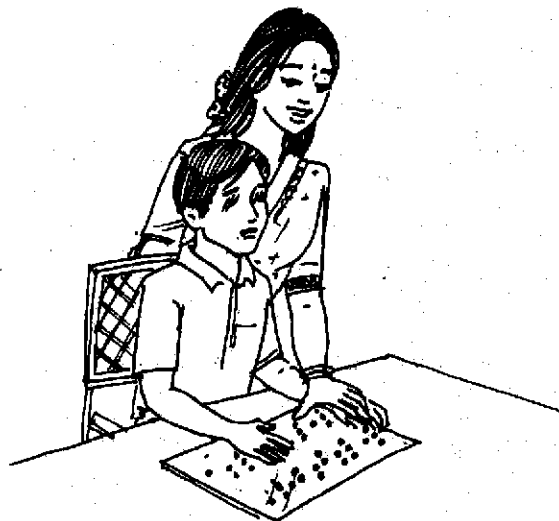
Children who are more academic can be introduced to regular graded reading series. For children with deafblindness/ VI with additional disabilities care must be taken to ensure that the language in these books is interesting and not too full of idioms and abstract language that discourage the child from reading.

Bright, attractive classrooms and teaching areas that have a good visual and tactile display of language materials greatly encourage a child to read.

Writing :

Children with deafblindness/VI with additional disabilities may have problems in writing due to vision impairments and difficulties with eye-hand coordination. As teachers we need to be aware of the special needs of our children.

Children need to be encouraged to express their ideas and thoughts in writing as much as possible. If the child is slow, we need to give him extra time to write. If he has difficulty in forming letters, give him support. Even if the letters are not clearly formed, we must accept them. The child can be encouraged to form better letters in other teaching sessions. For children who have difficulty in writing full sentences, we can give them objective papers to write that require him to only check, cross or circle an answer. If a child has problems in seeing clearly, we can provide the child with wide-lined paper, dark pencils or markers. White paper with black pens makes a good color contrast for children with low vision.

The language of the child must be corrected with caution. His diary writing needs to be left uncorrected to avoid lowering of the child's self-esteem. The teacher can keep the child's grammar mistakes in mind when teaching language, and thus correct them in a different class.

Should a child with deafblindness/VI and additional disabilities be taught braille or print?

Whether a child will be able to learn braille or print will depend on his

- cognitive ability,
- his residual senses,
- his interest level, and
- the practicality of his reading and writing in future.

  Print needs to be taught to a child who is more visual than tactual. Although the size of the letters can be increased to make reading easier, the practical aspect must be considered as this will make reading more difficult if he sees only one letter at a time.
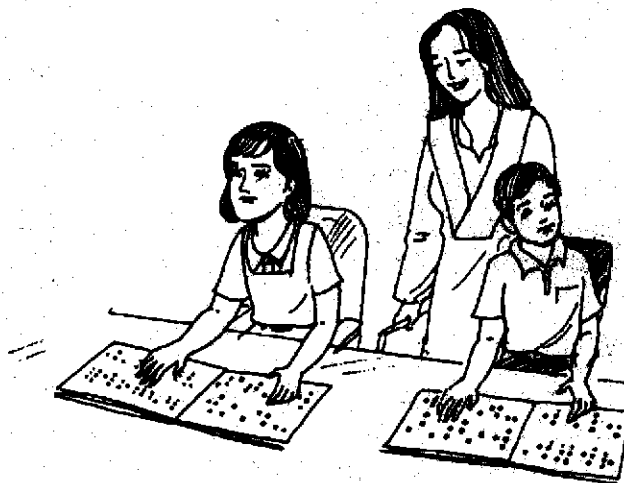
Braille is a more complex system that has alphabets and contractions and abbreviations as well as punctuation symbols. The differences between Braille symbols are finer than print letters, and recognition depends on making detailed spatial discriminations. Braille requires the development of motor skills as well as fine tactile skills.

Braille also requires spatial orientation, both in recognizing letters as well as following lines in an organized way across the page.

Braille requires a great amount of concentration and attention to detail.

Pre-braille activities that encourage fine tactile discrimination skills will prepare the child to read braille. A child who is to learn braille needs many experiences to help him understand the functions of braille as well as countless opportunities to practice tactual discrimination.

The child can be exposed to braille in many forms- name labels, simple books to play and touch, labels on his object calendar, and signs in his school and home environment.

Thus a child who has good useful vision, which he uses to get information, can learn print, whereas a child who is more tactual can learn braille. But to learn braille, a child also needs to be bright, have curiosity about his environment and have good language skills. Braille is very suitable for academic children whose language, reading and writing skills will continue to expand and develop.

Pre-braille activities for braille learners

A child who is learning braille needs to have some specific skills such as;

- tactual perception
- spatial orientation, and
- left/right and top/bottom organized movement.
  Pre-braille activities should be done in everyday situations so that they have meaning for the student. Art & craft activities, play activities are examples of everyday activities to teach pre-braille skills.

Some examples of activities:

- Matching & sorting of small objects that require using fingertips.
- Matching textures, beginning with ones that are very different from each other.

- Finding two similar objects like buttons, spoons, rings, etc.

- Matching shapes and designs formed by sticking yarn on cards.

- Finding a single braille cell on a paper and covering it with a sticker. Putting a sticker at each end of a braille line, by following the line with the fingers.

- Finding the braille word in each line of single braille dots and putting a sticker under it. Words that are motivating to the child can be used e.g. his name, favourite food, toy.

- Putting small objects in a container with many divisions, following left to right, top to bottom, using one hand to locate the space and the other to place the object. Different toys can be used to give practice in placing things in orderly rows.

- Imitating or continuing sequences started by the teacher, using beads, blocks, shapes, cars, and other toys. The child can also start a sequence for the teacher to follow.
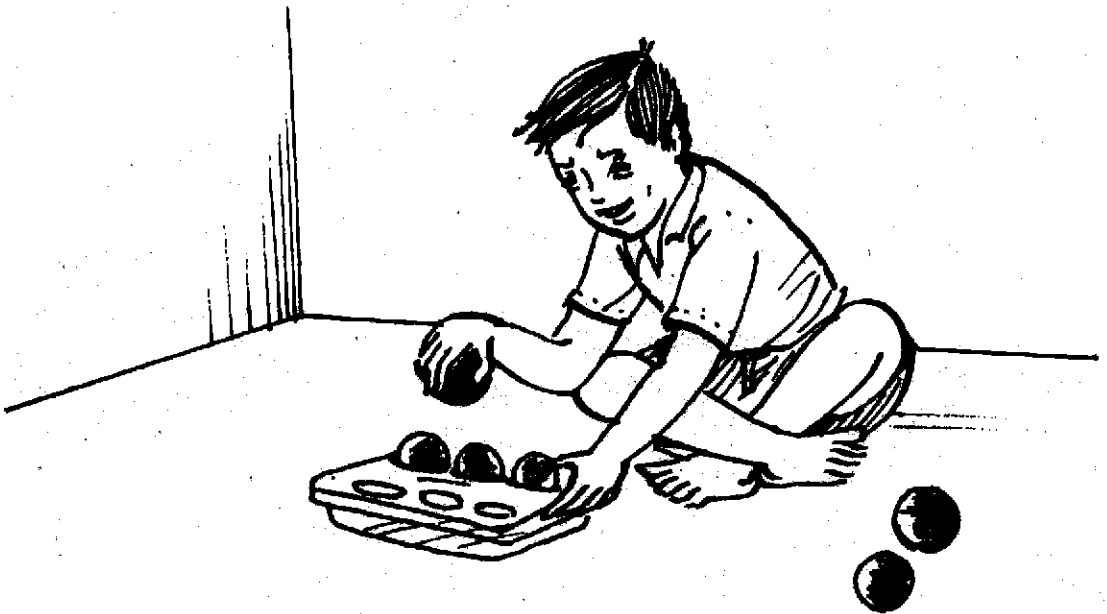
- Copying patterns that require spatial arrangement: putting balls into sections of a six- space egg carton, making an arrangement of pegs, putting toys in a box with sections. The teacher starts a pattern and the student copies it, and checks it with the pattern, or by memory.

When teaching braille, keep in mind:

Expose the child to the whole word before you introduce single letters. Read braille stories, expose him to braille names of objects and labelling of the environment in the same way as we introduce print. Teach the child that the top of a braille card will always have a braille line across it, or that the top right corner will be cut off. Encourage the child to read Braille as well as use a brailler braille state for writing. Systematic teaching and exposure to the written form will encourage literacy skills in children who read and write braille.

Things to remember :

1. The development of language, reading, and writing skills are all closely linked together. We can encourage children with deafblindness/VI with additional disabilities to read and write by providing interesting and motivating language experiences, by giving constant exposure to books and written forms in the appropriate modes. Providing necessary adaptations to the child for reading and writing also help in encouraging literacy skills.

2. Generally speaking, children who are more visual can learn print, whereas children who rely on getting information through their tactile skills can learn braille.

3. As braille is very complex and abstract, children who learn braille need to have cognitive ability, fine motor discrimination skills, spatial orientation skills and ability to concentrate.

4. Children who will be taught braille must be introduced to pre-braille activities that will help them to develop all the fine motor, tactile and spatial orientation skills that they will later require to learn braille.

Activity : The following aspects of literacy will be demonstrated and shown to the participants through observations of children and the environment at Helen Keller Institute. Concept & language development for children at different levels will be shown through the Unit Based Approach of teaching.

●   Storybooks (Braille and print, homemade and commercial), adaptations to those, use of story bags/boxes; experiences in handling books.

- Early read aloud experiences (sample books, finger plays)
- Early exposure to reading and writing routines; print and braille in the environment
- Concept/language development.
- Reading/writing books for academic students.
- Children learning through print/braille.

- Pre-braille activities with young children.

C. Bookmaking Activity

Participants will take part in one or more of the following activities:

Activity 1. Putting braille in a simple baby book.

Materials required: Baby book, Brailler, braille alphabet chart, and braille paper.

The leader will introduce the group to braille and show them how to make letters on the Brailler. After they learn this, the group will make simple words and sentences in grade 1 braille. These will then be cut and put below the printed words in the baby books.

Activity 2. Making a textured animal book.
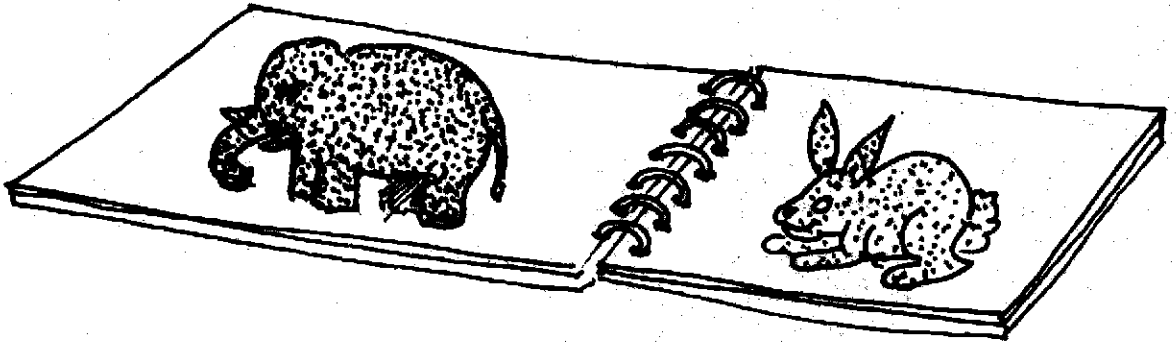
Materials required: Cardboard, paper, shoe laces/string, scissors, gum, textured materials.

The leader will facilitate the process of making a textured book. The words with a texture will go on each page. A short phrase for each page can be brailled and kept ready ahead of time. Different textures can be used for different animals. Sounds and actions of the animals can also be added on when reading the story.

Activity 3: Making a number concept book.

Materials required: Cardboard, paper shoelaces/string, gum, scissors, Braille number 1-5 on braille paper, felt pens, assorted materials like buttons, and textured materials.

The leader will facilitate the activity of making a page for each number. An object will be stuck for each number, with the number written in print and braille number below it. In this way, the child will be able to feel the textured number of objects on the page along with the number name.

Activity 4: Basic Shape Concept Book.
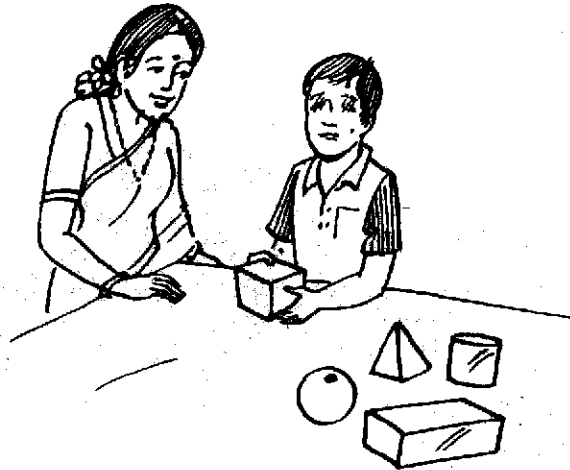
Materials required: Cardboard, paper, shoelaces/string, scissors, glue, objects.

Different objects to teach shapes can be used e.g. the lid of a round tin or square box covers. Plastic or cardboard can also be cut in rectangle or triangle shapes. 3 dimensional objects like balls and cubes can also be used.

Activity 5: Making an experience storybook.

The leader will discuss the experience activity to be done with a student, and then help participants to develop the experience book for the child to read. A shopping activity, playing in the park, a game activity can be done. The language and materials used to make the book will depend on the child's present level of literacy. Objects, pictures, print and braille will be used as appropriate.

Application Questions :

1. The mother of a young child with deafblindness/VI with additional disabilities says to you, "My child cannot learn to read and write. He cannot enjoy books like my other children."

    What advice will you give to this mother about the importance of early literacy for her child? How can she adapt regular books for her child with multiple disabilities?

2. Priya is 6 years old. She is deafblind. Priya loves to make friends and explores people and objects around her constantly. Is Priya a good candidate for learning braille? What are some pre-braille activities that her teacher can do with her to ensure that Priya acquires the necessary skills to learn braille?

Early Literacy Experiences

A process that begins at birth and involves all of a child's development in learning about the environment and understanding the meaning of symbol representation.

It depends on language-rich and hands-on experience based learning from which children make connections, relate new information, link symbols to communication, develop concepts, and realize that all these have meaning and function in their environment.

Challenges for Young Children with Deafblindness/Vision Impairments with Additional Disabilities in Acquiring Literacy-

- Reduced incidental opportunities
- Reduced materials in suitable literacy mode
- Challenges of picture related learning
- Difficulty obtaining appropriate literacy related materials
- Reduced experiences due to additional disabilities
- Lack of early and appropriate exposure to literacy by school and family

References :

1.   Emergent Literacy For Children Who Are Deafblind. Project Salute

2.   Miles, B, (2000). Literacy For Persons Who Are Deafblind. DB-Link. Monmouth, OR 97361.

3.   Miles, B., Riggio M. (1999). Remarkable Conversations. A guide to developing meaningful conversation with children and young adults who are deafblind. Watertown, MA. Perkins School For The Blind.

4.   Project Insite. A Model of Home Intervention for Infant, Toddler & Preschool Aged Children with Sensory Impairments & Multiple Disabilities. Home Study Manual, 1989. SKI –HI Institute.

Additional Reading Materials:

1.   Creating Literacy Opportunities For Young Blind Children by Suzi Newbold.

2.   Early Literacy: Braille and the Young Child by Mary Jean Sanspree, Ph.D.

3.   Experience Stories For Functionally Blind Pre-readers by Millie Smith.

4.   Literacy For Persons Who Are Deafblind by Barbara Miles M.Ed.

5.   Reading Comes Naturally: A Mother and Her Blind Child's Experiences by Diane D. Miller

6.Storyboxes: A Hands-on Literacy Experience by Norma M. Drissel.
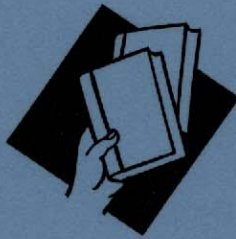
CURRICULUM DEVELOPMENT

CURRICULUM DEVELOPMENT

- Sumitra Mishra

What is curriculum?

Effective teaching leads a child to function as independently as possible in the world around him. A curriculum for children with deafblindness and additional disabilities needs to reach the goal of enabling a child towards **personal adequacy, social competency and economic independence**. And more significantly make his life a lot happier and healthier.
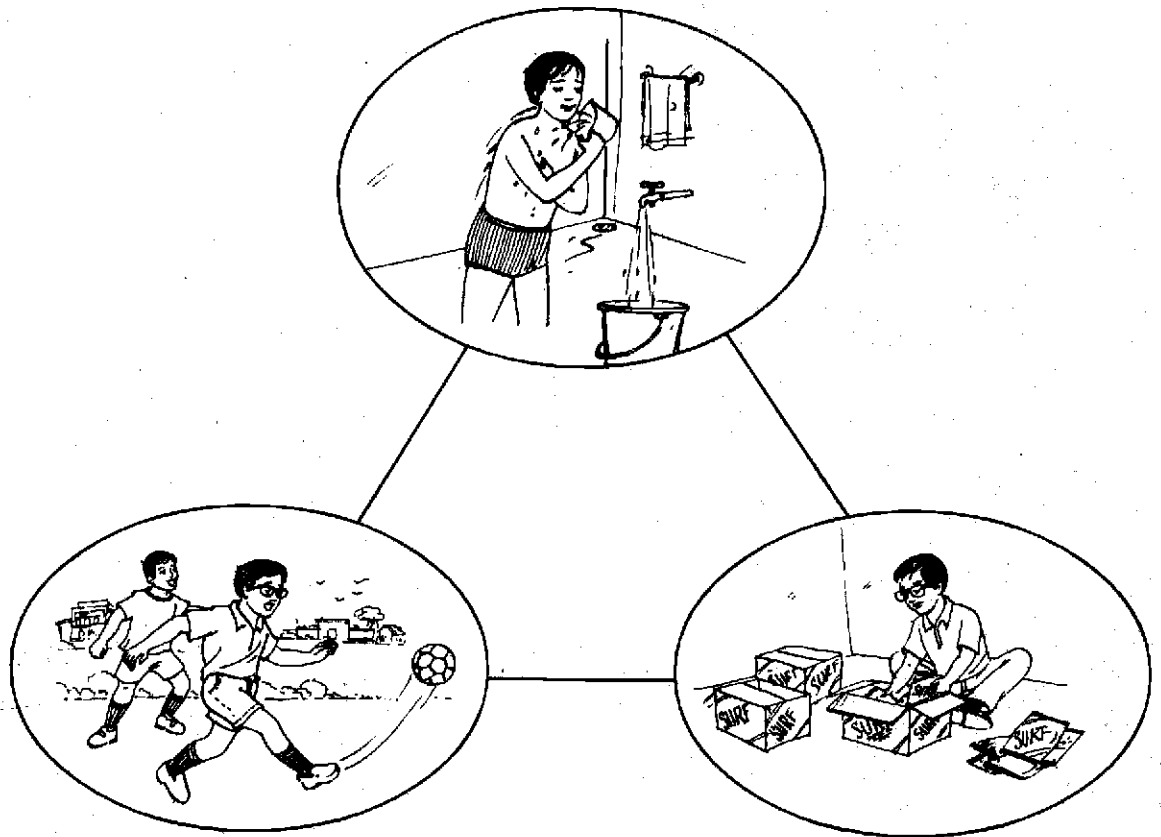
In other words, the learning experiences for a child with deafblindness and additional disabilities need to support him in taking care of his immediate self care needs such as eating, drinking, brushing and bathing as also his need to move from one place to another, search and locate things that he needs and solve problems naturally as they

occur in his life. Learning experiences shall also help the child to identify significant people in his life, including his family members and establish a trusting relationship with them. It will also help the child to ask for help and support whenever he needs it. Learning experiences also lead to economic independence wherever possible in the right context. The degree of involvement and independent functioning in a vocational set up might vary from person to person.

It is therefore important to keep in mind the primary goal for any curriculum for a deafblindness and additional disabilities – that of making his life happier and healthier.

Curriculum designed for such children includes planned exercises provided by the learning; and environment which helps the child to learn best using his remaining vision and or hearing along with his
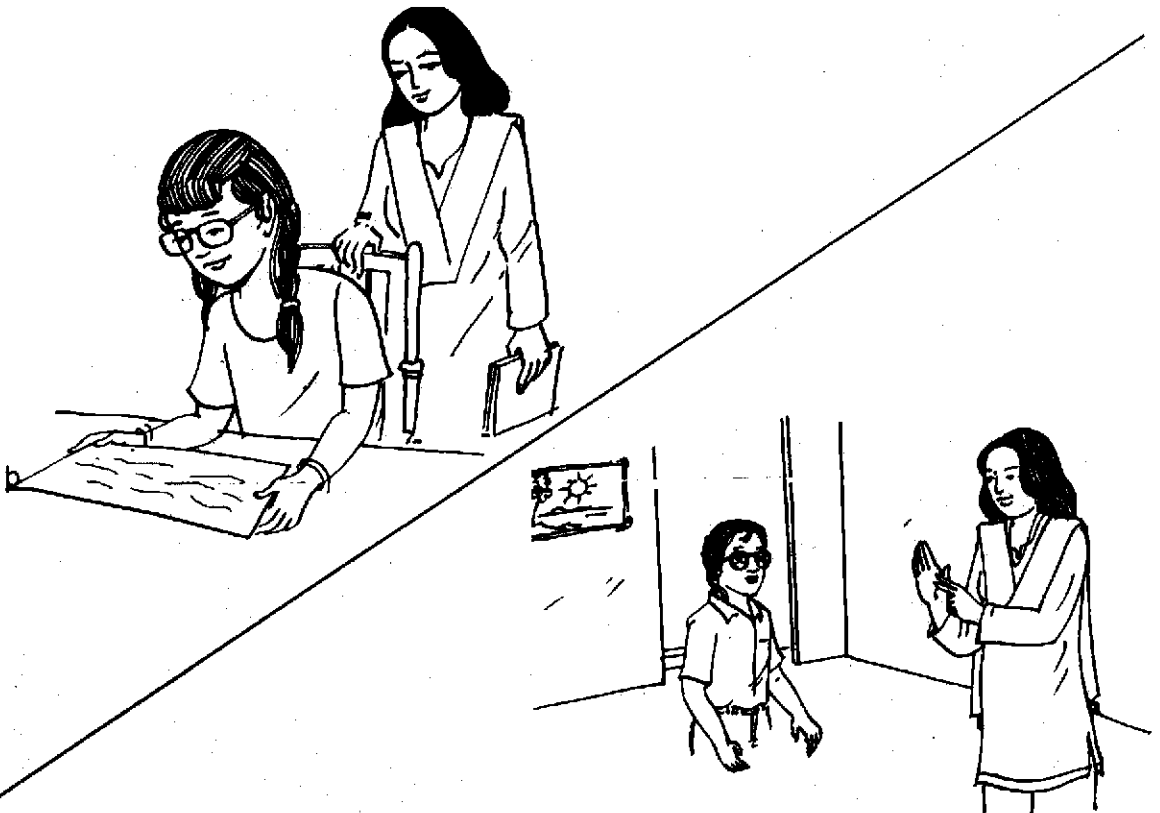
other senses. A curriculum helps to reach levels of performance that are appropriate and planned for him. And here this performance will vary from child to child as per his unique personality and needs. This performance is relevant to the child's immediate life and environment. Such a curriculum reaches each child individually and yet moves him through objects, persons and actions.

Activity : Before the above session divide children into two groups. One group with children below 6y and another group with children between 7y-15y. Think of a special classroom situation, or a time when the home visitor works with the children. List the 'exact' activities that you are doing with the children. For each activity, answer the following questions: Why are you doing this particular activity with the child?

Does the child need to do the same activity when he is not with you? Would the same activity be important for him to do when you are no longer in his life?

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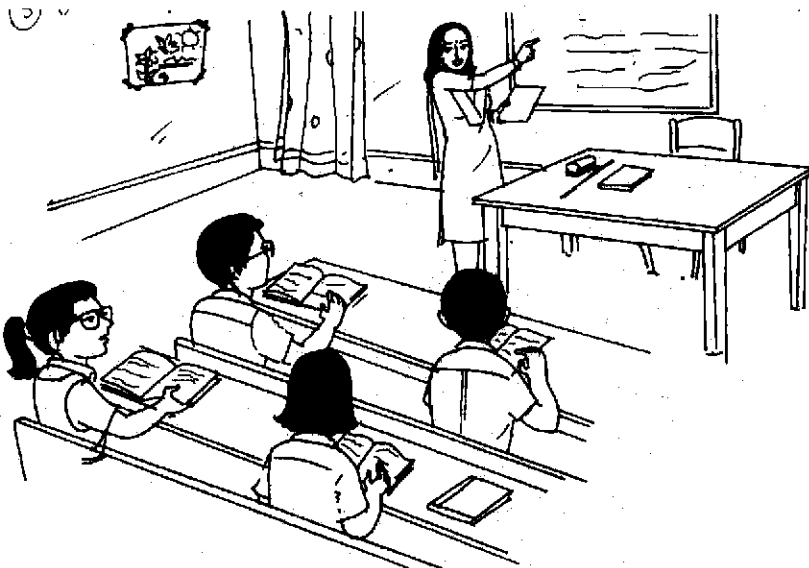
Who are our learners? Knowing them better

Although children who are deafblind with additional disabilities will have sensory impairments in common, they will differ as learners because of the degree of their sensory difficulties, and the existence of other disabilities, especially physical disability. Some will have brain damage and a resulting developmental delay or mental retardation. Others may initially function like one having mental retardation, but when provided with the right opportunity they will make marked progress in their responses. Many others may have serious medical problems that need constant attention and this may have an impact on their ability to learn and remember.

Each child with deafblind with additional disabilities will have unique needs. The teacher has to choose appropriate methods of teaching to meet the diverse needs of such children. Unlike that of a typically developing child, their learning needs to be supported systematically. The teacher shall consider how to arrange the physical environment to maximise each child's learning and how to prioritise learning goals and pursue them. Likewise the teacher must appreciate the unique ways in which these children receive information. It is of paramount importance that the teacher or any other worker who works with such a child has a complete understanding of the child's interests, his joys and little moments of achievements. This information and understanding will further form the basis for more intensive observation, assessment and teaching practices.

Who implements the curriculum? A team approach.

Anyone who comes in contact with the child on an everyday basis has a role in teaching the child. We may not be very far off the mark when

we actually say this. For we understand that deafblind children with additional disabilities need to be taught in their natural settings, at the time when an event would occur naturally and with whom the child is familiar. In this context, the child being the "Focus Person", every member of his family, school, neighbourhood and community who get an opportunity to interact with the pupil in a regular way are involved in the consultation and teaching process.

As important members of the educational team, the input of parents and other family members in the decisions for the child's education is of crucial value. Family members are often the best persons to know and talk about their own child. Also education for the child aims towards relieving some of the stress and responsibility that the family has been shouldering till date all by itself. Often the family members - mother to be more precise is the first and only point of contact for a very long time. It is crucial to take the mother's support and prioritise goals for intervention that the mother feels are the most important ones for her and her child. It is the role of the teacher then to discuss and formulate

goals that are realistic, achievable and developmentally appropriate for the child.

Besides the family members, the teacher and a host of related professionals are also involved in the educational process of the child. Some of them include the speech therapist, physiotherapist, the occupational therapist, vision specialist, orientation and mobility instructor, art and music therapist, psychologist and a host of others depending upon the needs of the child and the availability of trained resources in the area. Each member of this multidisciplinary team has a specific role to play starting with assessment to designing the intervention programme evaluation and follow up action. The planned and coordinated efforts of the entire team helps the child to move along the educational programme across time, people and settings. Mostly the teacher remains the key worker or main person of contact for the child as well as coordinating the information between the different professionals involved in this educational process.

Activity : Think of your individual programmes. Who all are currently involved in "teaching"? Who all are supporting 'teaching'? Make a list of the additional resource persons already available in your organisation who could be roped into the child's day-to-day training and what would be their specific roles.

Where do we carry out the curriculum : The learning environment.

A child with deafblindness will learn best in a real life situation where skills are taught in the appropriate place and at the appropriate time, giving the child the motivation and reason for learning The environment where the child will be nurtured, educated and led out of his isolation must be a reactive one. Motivating the isolated child to learn is often an arduous task. Providing a reactive environment for the learner indicates that maximum care is taken for incorporating learning opportunities within the routine of eating, bathing, cooking and shopping activities of

the day. And one must keep in mind the child's emotional and social responses and opportunities to develop a positive self – image through success experiences. For example, the basic activity of eating and drinking can have a profound impact on the personal, social and communication development of the child.

Consider this experience of Shalini. She has difficulty in chewing and swallowing food. She however eats along with her younger brother sitting at the same place everyday. At, mealtimes Shalini 'touches' and talks to her brother, she sees what each one is eating, she helps her

mother feed her younger brother and her younger brother feeds her too. Eating becomes a pleasurable activity for her rather than a prescribed time to carry out 'personal goals' Along with learning to chew and swallow her food she is also learning to anticipate her mealtimes through the established routine. She recognises her mother and brother and interacts with them. She is expanding her knowledge about different types of food. And she is also developing the concept of eating – that everyone eats similar kind of food as her, everyone uses mouth to chew and swallow food and everyone sits at the same table to have a meal!

In this context, we can see that Shalini is having an opportunity to learn through actual experiences. Experiential learning gives our children an advantage to relate learning opportunities to their real life. It helps children to learn the specified activity as well as many other natural experiences of the sighted hearing world associated wit this activity. Learning through doing things and doing it together with people provide the right backdrop to help children to learn from the immediate environment around them.

Activity: Involve 2-3 children involved in water play. Note down what the children are directly learning from this activity. Also note down, what additional multi sensory information is being received by the children.

THINGS TO REMEMBER

- The overall aim of a curriculum is to make the life of a child with deafblindness and additional disabilities happier.
- The curriculum should bring about independence in personal adequacy and social and economic
- Children who are deafblind with additional disabilities have unique needs and learning styles
- A curriculum increases the child's interaction with people, objects and actions of the world around him
- The person with deafblindness with additional disabilities remains the focus of any educational decisions and settings.
- Family members make immense contribution to the educational decisions of the child.
- A multi disciplinary team approach is an effective way of working with children with deafblindness.
- It is important to provide a reactive environment to the child for increasing his opportunities for interactions
- Children learn best when they experience the information within their immediate environment

Questions to think about :

1. What makes children with deafblindness and with additional disabilities so unique?

2. How can we increase experiential learning for such children in their day to day activities ?

DESIGNING AND DELIVERING TEACHING PROGRAMMES

Developing a Teaching Programme

Independence is the goal: No matter how small or big the task is, the child should learn to use it to make life easy and simpler for him

Teach skills that are functional and meaningful: With the limited opportunities available to the child, it is wise to teach him things that are directly related to his environment and those that he has high chances of doing through out the day.

Teach skills in a natural setting : This point can never be stressed enough number of times. The child is able to remember things that he learns while going through there day to day routines. This helps him to learn better and remember.

Break tasks into small steps: Small steps help children to practice better and remember better.

Provide assistance as needed: Encourage the child in every attempt. Do not laugh at or scold the child when he is trying his best.

Provide repeated opportunities to practice : This will help the child to get opportunities to try out the activity again and again.

Take advantage of the teachable moment: Sometimes you may not plan to teach an activity, but the child shows curiosity to explore a particular object. Use this time to teach him more about that object.

Speak to students using normal language and voice: They would understand that. We need not shout and scream or order them around because we are trying to teach them

Use real objects: When experience to know about the world is so limited, it is better to use objects that he sees and uses everyday, rather than expensive and unusual things.

Develop Routines: Have fixed timetable for the day with the child. This helps him to have more control over his life and to anticipate what is going to happen with him next. This also helps to encourage communication attempts by him immensely.

Multi sensory approach is the best: It is best to make use of all remaining sensory abilities of the child – seeing, hearing, touching, smelling and movement should all be a part of the teaching moments.

Plan inclusive activities : With highly individualised activities being planned for the child, there is always the risk that either the parent or

one care giver is constantly trying to teach the child. Remember it is important for the child to know what others are enjoying doing and for him to be a part of that too. Plan certain activities that he can do with his brothers or sister, neighbours and relatives.

Make use of resource persons from the community : An old grandmother from the neighbour's house or your local chowkidar or even your school gardener can teach your child something essential in his life. Take the best advantage of these 'teachers'

Be an advocate for the child: If need be, speak out for your child, and fight for your child. Make sure that at least you are giving the best of yourself to the child.

Teaching Children – Doing things together

The family members and teachers, caregivers and therapists etc have a constant challenge on their hands to provide clear and precise information to the child with visual impairment and additional disabilities/ Deafblindness. At times, the adult needs to act as if they are the eyes, ears and hands of the child to understand what is going to be meaningful and relevant to teach the child.

It is also essential that a good emotional relation between the child with visually impairment with additional disabilities/Deafblindness and his care-giver develops, because it is the person and not the specific training activity that will motivate the child to try and do things.

It is helpful for the child to feel successful at every attempt that he takes. The role of the educator in understanding what interests the child, how long can she keep the child's attention and sometimes, physical energy at a particular task is also important.

It is important to provide a child with visual impairment with additional disabilities/deafblindness child with a reactive environment rather than a directive environment. The child and his partner need to do things together, rather than the child being told what and how to do things all the time.

Mother, father, brothers and sisters, grand parents, teachers, therapists, medical doctors, community workers etc. all form a part of this teaching and learning world for the child with visually impairment with additional disabilities/deafblindness.

Giving choices for communication, problem solving, exploration and independent mobility are the key areas. It is important to think about ways to help the child, to know what will be helpful for the child to learn in his life.

Constant interactions between child and his parent or other caregiver is important. This will help build a safe and trustful world for him.

Each attempt to teach the child new skills in life, needs to focus on the visually impaired with additional disabilities/deafblindness child's residual senses and other remaining strengths. It is always helpful to introduce each teaching activity in such a manner that the child makes use of all his strengths.

Building **learning activities into the child's regular day-to-day life** helps him to understand and use the newly learnt skills better. It helps a child to use newly learnt skills within his immediate routines.

Reward and reinforcement are very very basic to the learning environment of the child. Attention and praises will not spoil any child with visual impairment and additional disabilities/deafblind any more than it would spoil their brother and sister.

AND ABOVE ALL – 'BE POSITIVE'

When do you know, if your teaching efforts are helping the child at all?

When the child with visual impairment and additional disabilities/ deafblindness begins to:

- Enjoy the partner being with him
- Anticipates routine activities like bathing and eating.
- Cooperates, even passively, while you move his hands and body.
- Shows enjoyment and preference for a particular activity that you are doing with him regularly
- Uses his remaining vision, hearing and movement
- Attempts to 'talk' to you through different sounds, body movements, gestures or signs

Space organisation – making it happy and easy.

For deafblind children the classroom and other learning environment is an important factor in their ability to access learning. Careful thoughts need to be given to not only the physical environment but also to the noise levels and lighting conditions of the area. Stimulating environment present the children with exciting opportunities to explore. However the physical environment also needs to look into the individual deafblind child's needs for stimulation and create an environment accordingly.

Therefore the environment has to be designed to ensure that the child can receive information about what is happening in the room and space and that it is organised to help them explore or orient themselves within it.

Group activity – 4 groups.

Group 1: Prepare a design for an educational setting, (classroom, home

community) for a child who is 3 years old. Partial vision, CP, speech disorder.

Group 2: 7 year old, totally deafblind boy, very scared to touch and explore

Group 3: 12 year old girl, totally blind, partial hearing, and self-stimulatory behaviour

Group 4: 16year old boy, totally blind, good verbal communication, mental retardation.

Make a map to illustrate your point.

Questions to think about

1. How would you use the information discussed above to evaluate your child's performance based on his IEP.

2. Try and think of yourself as a child with visual impairment and additional disabilities/deafblindness. What kind of environment would make you an interested learner?

Things to remember

- Children learn best when we are also learning with them

- Teaching has to be clear, simple and fun.

- Constant interactions at the child's level and pace is a part of the learning environment

- The space around the child makes a big difference to the child's performance

- Space organisation is as much as part of the teaching methods as working on the IEP.

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DESIGNING A FUNCTIONAL CURRICULUM

- Sumitra Mishra

The curricular content

There are different approaches to determine the exact content of curriculum. However the group of children that we are referring to here are those children with more than one disabling condition, primarily involving at least one sensory loss. And we have also discussed about the impact of such a loss on the learning characteristics and needs of the pupil. In this sense, the content of the curriculum is very much determined by the individual needs of the child who is deafblind and having additional disabilities

When a curricular approach takes into account the pupil's current individual needs and his future needs and designed to meet his needs it is called a Functional Curriculum. The instructions in the functional curriculum focuses on the individual needs of the child as compared to the expectations from him in his immediate family and community environment. Different skills are taught across the life areas of independent living, work, leisure and recreation, regular education and community life. And the activities are based on the child's chronological age. It also takes into account the individual adaptations and aids and appliances required by the child to enable him to learn the activity to the best of his ability. The functional curriculum uses the child's interests and strengths as the basis for planning intervention strategies. The diversity of the impairment is so great that there is no common baseline from which to begin to work. The curriculum framework thus begins with the child. Family members and other significant members of the child's life play a role in the intervention programme for the deafblind child with deafblindness.

The curriculum addresses the needs of the deafblind child in the following areas:

Independent Living Activities : Independent living activities such as personal care activities – brushing, bathing, eating, toileting, grooming etc are included as part of the 'teaching' experiences. In the early stages the parents/the teacher will 'do' the activities together coactively. Later the child learns to do it by himself. It is important for the adult to give this opportunity to the child numerous times. Doing everything for the child deprives the child of a learning opportunity. This area also includes training in cooking, shopping, washing clothes, orientation and mobility, cleaning and maintaining own belongings.
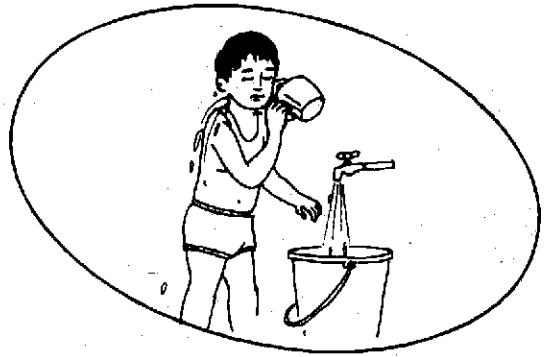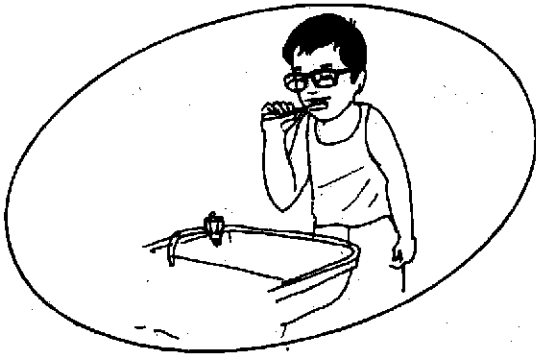
The empowering of the child and his right to do things for himself start very early in his life. The opportunities for offering choices are many and consistent during these training situations.

Let us understand these ideas better by getting to know more about Deepak. Deepak is a 15 year old boy. Deepak was born with total blindness. He is also observed to have mental retardation. Deepak enjoys rocking his body and playing with his fingers. He is very particular about his daily routine and gets very upset if there is any sudden change. Deepak has been receiving specialised services in a centre based programme over the last 6 years. He also receives support on a regular basis at his home.

Deepak is learning to button and unbutton his shirts and trousers at the time of dressing up. He is also learning to clean his private parts at the time of taking his bath. Deepak assists his father in shaving by setting up things for him and putting them away after his father has finished shaving. Deepak is learning to use the cane to walk in a straight line on the roads outside his home and school. He is also learning to locate the direction of the traffic sounds while crossing the roads. He moves along independently within home and school. At the playground, Deepak can take a stroll by himself and reach you on hearing your voice.

He loves good food and tells the name of each dish on smelling it. He finds it difficult to share his food with others. "Baigan ka bharta' is his favourite dish. His weight needs to be monitored and he hates it if people stop him from taking extra helpings of his favourite dishes.

Work : The area of work includes training in setting where the child is expected to perform a job. Such training starts very early in life, and does not necessarily have to imply remunerative jobs. Such training activities would include learning to keep away ones own toys after play, laying the table for dinner for the family, washing one's clothes, stacking

packets of pulses and spices in a neighbourhood kirana shop operating a telephone booth, manning a tea stall, feeding paper into the printer and so on. Including work skills as a part of the curriculum also helps in training in concepts of now and later, my role and his role, reading time, simple academics, meaningful occupation and overall, a sense of self esteem.

Continuing to learn more about this, let us now see how Deepak is learning 'work' skills. Deepak has now developed an understanding of clear areas for different activities through repeated opportunities. He also anticipates his routine for the day, by walking up to these areas and searching and locating the related materials. For example, one of his tasks during the day is to walk up to the office lounge of the school and pick up the newspaper of the day for discussion during class hours. After discussion, he accompanies his other classmate to return the newspaper. During the span of the school week, he is learning to shop for his craft and cooking activities. Deepak is assigned the job of collecting the dustbins from each class room every evening and emptying the contents into the main dustbin of the school and putting the bins back in the respective rooms. He is also learning to dial his home number and speak to his mother about the food that he has eaten and if he has enjoyed the taste that day. At home, it is his responsibility to carry the glasses of milk to his siblings' table every evening and collect the empty glasses after they have finished with it. There are numerous such 'work' activities that Deepak does throughout the day for which people depend on him, appreciate his time and help and miss him if he 'takes off' for a day from work.

Recreation and leisure : Training in this area includes those environments in which the child functions during his free time. Numerous opportunities for exercising choices or likes and dislikes are effectively included in this area as with the other areas of training. Leisure and recreation as a part of the teaching time gives an opportunity to seek out preferences for friends, materials and activities that he may not usually get to exercise during the day.

Amidst all the learning and working Deepak makes sure that he gets some time all to himself during a day. One of his happiest moments during the day is the time in the evening when he walks across the road with is sister to buy himself a 'Pepsi'. He deserves it after a hard days work. Deepak also enjoys private time twice a day, when he loves to sit by himself in his school and home corner and occasionally play with his body. Being a growing boy, he enjoys getting into a fist fight occasionally with his peer and main competitor for his teachers attention. Everyday Deepak goes for a stroll in the park, where he runs, jumps, chases and in-between all this ,manages to pick up little sticks and stones and stuffs them into his pocket for later use. He loves to play endlessly with these things when left by himself.

Community: Learning takes place in the child's natural environment. It could be at the garden, at the neighbour's house playing a game with the neighbour's daughter or in the local shop etc. Such opportunities help him to learn a particular set of tasks at its most naturally occurring setting

Deepak frequently interacts with people in the shops across his house while he goes for his household shopping along with his mother. He also has the same experience when he goes shopping for his school activities. Everyday stroll at the park next to his school means that he is familiar with the gardener at the park. His 'work activities' also ensure that he has regular contact with the cleaner, watchman and receptionist at school.

Academic areas: Apart from the above learning areas the child should get an opportunity to pursue the regular academic areas as his sighted/ hearing peers would do in mainstream schools. This is determined by the needs of the child himself. However academic subjects are taught to the deafblind child as prescribed in the mainstream curriculum with minor adaptations and support if the child is ready and the learning is relevant for him to interact with the world around him especially in his social relationships with peers. Such regular academic subjects are further simplified and taught to children, who cannot as much benefit from the prescribed school curriculum but would however benefit learning about it in a context that they can directly feel and perceive.

During the course of the day, numerous opportunities prop up for Deepak to count the number of plates or dustbins, money or shopping. He also reads his tactile shopping list made of wrappers of things he has to purchase such as medicine and bandage, for preparing a school first aid kit, toiletries wrappers for his own and father's grooming needs and so on. He is learning to associate the time of the day with the beginning and end of the activity. While crossing the streets, or operating the gas stove he is learning to identify his safety needs.

Group activity :

Prepare a functional curriculum plan for :

Tanvi, a four-year-old girl, is diagnosed to have congenital cataract. It is suspected that she responds to light. She is also diagnosed to have moderate hearing loss in her right ear. She has spasticity in her lower limbs. She is sitting with support and does not reach out with her hands to hold objects. She identifies her mother through touch and smell. She cries when she needs something

Nikhil, 16 year-old boy, can turn to his side while lying on the bed. He sits with some support. He needs to be carried from the bed to chair to sit and watch television. He makes different kinds of sounds during the day, some of which is interpreted by his family members. Clinical tests show that he has normal hearing and vision. On observing him it is difficult to assess, if Nikhil identifies what he sees or hears. He gets at least 3 to 4 epileptic attacks everyday and has been hospitalised for respiratory disorders numerous times

Theme Based Curriculum

One way of developing a functional curriculum framework is by developing 'themes' to teach the required functional skills to a multiply disabled child. Theme-based instruction cuts across different curriculum areas and allows the sharing of information from each discipline. These areas, such as communication, social interaction and literacy skills, relate to one another and share common information that can be recognized and organized as a whole. It is a holistic approach towards education that ties all skills, subject matter and activities to one identified 'theme' or 'unit'. This theme relates to the experience, level of functioning and cultural background of the child.

Thematic units include a number of lessons centered on a particular theme in one content area. For example, a thematic unit for teaching could be developed around 'Summer Season', Diwali Festival' 'Post

Office' etc. This results in greater continuity in programming and natural connections to be made by the child. The most important idea behind this approach is to give every child a 'hands-on' experience on every activity built around the theme.

The theme based instruction is based on the **principle of Partial Participation.**

Partial Participation assumes that we all cannot do everything and that sometimes learning to do a part of a task is just as important. Partial Participation allows a teacher to look at any task and find some skill that each child could work on, from its entirety to just a small section. The principle is based on the assumption that all children with special needs can acquire skills that will allow them at least in part, to function in a work environment as well as their community. The concept of Partial Participation focuses on the children's ability to participate in one or more components of an activity, sometimes with support. This allows the child to explore a wide variety of work based learning activities rather than be excluded from it.

Personal

Bathing
Washing face and arms using soap
Choosing light clothes
Wearing appropriate summer clothes
Applying powder and body fresheners
Sorting out used clothes for washing
Washing and drying clothes
Filling water for home and school

Motor

Using hose pipe/bucket to pour water in front of house or balcony
Watering plants
Peeling cucumber.
Cutting and scraping watermelon
Squeezing lemon
Crushing ice
Operating the juicer
Rinsing clothes with both hands

Cognitive

Sorting different types of summer fruits and vegetables.
Discriminat between hot and cold, hard and soft, liquid and solid.
Putting together a recipe for lime juice, fruit salad etc
Exchanging money for purchasing related items
Making right choices for measures and weights for cooking and washing purposes.

Orientation and Mobility

Locating the flower beds
Orientation to the courtyard/ balcony
Reaching the vegetable/ fruit/kirana shop
Orientation to the kitchen

SUMMER SEASON

Social Interactions

Offering water to guests
Preparing lime juice for classmates
Taking turns to water plants
Interacting with the shop keepers in the market place

Work Activities

Setting up water counters in front of school building for passers by
Cleaning and filling water in room coolers
Closing windows and pulling up curtains at home every afternoon
Washing and drying own clothes
Drying and collecting clothes of family members

Leisure and Recreation

Playing Antakshri
Preparing the summer angel – a collage of summer related material wrappers etc.
Indoor games – Carrom and puppets
Preparing a soft drink for self
Evening walks

Functional Academics

Reading – shopping wrappers, recipe books,
Identifying objects and their use – wet towel, ice, sweaty clothes etc
Identification of summer clothes
Writing – Preparing own summer holiday scrap book
Writing recipe books
Counting money for shopping, ice cream etc
Identifying time for load shedding daily

Develop themes on any two of the following: Animals, Independence Day, Family, School, Health, Plants

Spiral Curriculum

Learning starts from ones own body. All children relate their initial experiences of the world to their own body. For example a child cries when he is hungry and gradually learns to control his mother's movement by crying out for attention. Later the same child learns that other people are also making different noises to catch his attention.

Similarly, Rahul a blind baby with limited comprehension of meaningful speech enjoys playing with the car when it 'runs over' his hands. This expands to include running the car over the teacher's hands. The teacher and Rahul then take turns in running the car over each other's hands. This further leads to exploration of each other's body parts and peeking and tweaking nose and ears games.

It is interesting to note here that Rahul, who did not enjoy touching other people or things, now plays this 'body game' with his teacher. The game still starts with the car running over his hands first.

This is an example of how we need to tie different learning areas together and build it around the child's own understanding of his body. And this is known as spiraling curriculum. Rahul is now getting an opportunity to learn about his body parts, match it with another real set of body parts, increase his exploration and shift his attention from his own little

isolated world to another person to another object, all within his immediate environment.

Activity based scheduling

Group activity: Discuss and present a typical timetable from your programmes. Each group presents a time table for one of the following age groups – Preschool group (3 – 6 years), Primary group (7 – 12 years) transition group (13 – 18 years)

Keeping the above example in mind, let us think of two children we have already discussed earlier in this chapter and see how each one of them can benefit from this approach. If we were to use this broad curricular framework for Shalini (discussed earlier) where would the curriculum fit her needs.

She would still be learning to take her bath, and her level of performance would be to pour water on her body using a mug, and soaping her arms and tummy. She would be experiencing the coolness after standing under a fan after the bath. Deepak's (as discussed earlier) expected level of performance would be to fill up buckets of water himself and take a complete bath. He may still need reminders on when to start and when to stop. At the end of the bath Deepak would indicate the coolness that he experiences by calming down his body rocking, getting to be more interactive with his father and so on.

Similarly, Shalini's involvement in work activities would extend to filling up the water bottles along with her teacher or mother, pulling the hose pipe and walking along the garden, feeling the water at the nozzle while watering plants. In the same setting Deepak is learning to fit the hose pipe to the tap and identifying the exact plant from where he would start his watering activity. He would feel the mud and discriminate between wet and dry mud and take appropriate decisions.

The above description is a brief overview of how a curriculum is structured and yet flexible for meeting the individual needs of the children. This also explains the concept of partial participation. Even if Shalini is not able to do the entire process of washing her clothes, doing it in parts such as carrying her clothes to the wash tub, or mixing the detergent in the water is as important an exercise for her to remember the sequence of the activity and learn to anticipate it at the right time. For that matter even Deepak continues to need support in reading the recipe book for making water melon juice. However the repeated exposure to the scrap book containing the pieces of watermelon skin and seeds, the sugar and salt pouch, the plastic knob stands for the juicer and the tactile cut out glasses helps him remember the sequence, match the symbols with the real objects required of the

activity, gives him ample time to accept the fact that he has to go shopping for the same and provides a natural reinforcement for him, considering his love for good things to eat and drink.

Activity schedules incorporate tasks into the time table that will actually help the child learn a set of skills to perform that particular task. For example, in the pre school group of children, they learn to bounce a ball, roll over a tin can, stretch out and reach for the mother's face -- all during the play time. And this ensures that the children are going through a physiotherapy time -- but one that is enjoyable, that has a clear beginning and an ending, that is age appropriate, that provides many other opportunities for learning concepts such as stop and go, up and down, front and back, me and you, your hand, my hand and so on and so forth.

Now compare this activity to a skill based time table where the child is fitted into a physiotherapy session where the observation is focussed simply on position, handling and muscle movements. It deprives the child of all the other learning mentioned above. This is not to say that physiotherapy is less important for the child in any context whatsoever. However, as we have discussed many times earlier, all learning that takes place in the child's natural environment and takes into account the child's own interests is much more productive.

Activity: Take your own lists of skills as mentioned in the earlier presentation. Make a fresh time table addressing all these skills and including it in real, meaningful and age appropriate activities for the children.

Things to remember

- An effective curriculum addresses the individual needs of the child

- A functional curriculum approach helps to plan activities that are meaningful and relevant to the child's own life

- The functional curriculum approach has different areas of training such as independent living, work, recreation and leisure, community orientation and academics

- Curriculum training includes many opportunities for expressing choices and showing likes and dislikes.

- Although such children present unique challenges, they can enjoy a high self esteem and high quality of life

- Theme-based instruction cuts across different curriculum areas and allows the sharing of information from each discipline

- All children relate their initial experiences of the world to their own body.

- Activity schedules incorporate tasks into the time table that will actually help the child to learn a set of skills to perform that particular task

Questions to think about :

1. How is a functional curriculum different from that of the more traditional developmental curriculum?

How would you maintain a balance between different approaches and devise a more relevant curriculum for your student with deafblindness and additional disabilities. Give an example.

DEVELOPING AN EFFECTIVE INDIVIDUAL EDUCATION PROGRAMME

-Sumitra Mishra

Children with deafblindness and additional disabilities need specially planned and systematic instruction suiting their individual needs, strengths and environment.

What is an IEP?

The Individualized Education Program (IEP) is a written education plan that describes the special education and related services a child will receive, based on his individual needs and strengths. Why is it called so – individualised, because the education /training programme is specifically designed to meet the learning needs of the individual child rather than general syllabus for a group or class full of such children. The IEP also specifies the instructional strategies to be used with the child, his interests and likes, his preferred mode of learning, his pace and speed of learning, and limitations due to other associated problems including motor difficulties. In other words it is a complete programme by itself for an individual child that will be implemented for a specific period of time. Thus the main aim of the IEP is to provide appropriate education and training to the child .

Who is responsible for developing the IEP?

The child's IEP is developed by a team that includes parents, special educator, related therapists such as the speech and physiotherapists and whenever appropriate, the child. The team meets at the beginning of the school year and later during its quarterly evaluation period to discuss the various aspects of the IEP and take the most appropriate decisions for the child.

It is important to note here that the parents are the primary support members of the team. Most of the plans as envisaged in the IEP would be carried out by the parent with help and guidance from the other members of the team.

The special educator or the community worker is the key member of the team in coordinating the between the other members. He or she is primarily responsible to ensure that the IEP is being implemented in letter and spirit during the planned term. In case of any new information

or need to change or review earlier decisions, the educator takes the initiative in discussing it with the other members of the team.

What must be on the IEP?

An IEP is based on the child's individual needs and strengths. In writing the plan, the team must consider the results of the child's most recent evaluation. The child's IEP must include information about:

- present levels of performance that describe how well the child is doing in areas such as communication, social or self-care skills, motor development, language, vocational, recreational skills, and in academic areas (arithmetic, reading, and writing)

- Annual or long-term goals the IEP team expects the child to achieve during the year. Goals must focus on helping the child to become as independent in his own life within his immediate environment.

- short-term objectives and procedure that are measurable, short teaching steps to help the child reach the annual goals for learning and development

- methods for reporting the child's progress to the parents, including information about progress toward goals and whether the child will achieve his or her goals by the end of the year

The information collected needs to give maximum inputs in the areas such as the child's communication, social interactions, self care needs, mobility needs, vision and hearing use, position and posture, hand functions, functional academic needs, work related activities, recreation and leisure time interests and community participation needs.

What role can parents play on the IEP team?

Here are some steps the parents can take to ensure that the IEP works for the child.

1. Get and share accurate and helpful information about the child through the evaluation process, such as information about the child's learning style and need for changes and adaptations

2. Discuss the goals the parents want the child to reach and share the hopes and dreams for the son or daughter.

3. Encourage the team to look at all aspects of the child's life and how they may affect his or her learning and development.

4. Review and measure the child's progress toward meeting goals on a regular basis.

5. Understand the special education process and the rights, and practice good communication skills and be persistent.

6. Build relationships with other team members who work with the child and family. Show appreciation when things are going well and speak up when the parents believe the child's program needs improvement.

Activity :

How do you see parents' involvement increasing in the educational decisions of their child? Take an example of a family that has proved to be a challenge for you to motivate them to become active participants in the child's education. Come up with a list of strategies you would go back and use to make this relationship a more mutual and supportive one with respect to their child's education.

(Understanding family needs, realistic planning and expectations, finding a common ground to work on)

How do we go about preparing an IEP.

(a) Assessment

Assessment is the first step in the IEP process. All the IEP team's decisions must be based on assessment data. The child must be assessed in all areas of his performance. This assessment is mostly done by observing the child across different settings carrying out and being involved in various tasks. Interviews with people associated in the child daily routine also support our assessment process.

(b) Curriculum

Curriculum is the next step. Present Levels of Performance (PLOPs) are taken from the child's assessment data. They state exactly what the student is currently able to do. And these include remarks on the child's performance in personal areas such as brushing, toileting and so on as well as his academic areas, work areas, social interactions, community participation etc.

After the PLOPs have been identified, the team begins the process of writing measurable annual goals. The goal is a statement of what the IEP team expects the child should achieve by the end of the academic year.

Developing short term measurable objectives follows the writing of goals. These are best thought of as three or four intermediate steps between the PLOP and the goal. This includes details on under what condition, the student will do what, after training period of how long.

When the goals are specific, observable and measurable, the parents and educators have a systematic approach for observing the child's progress. The IEP must include the extent to which the child's progress is sufficient to enable the child to achieve the goals by the end of the

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school year. After writing goals and objectives, the IEP team also includes information on all the related services that the child is going to receive within this period, such as speech therapy, training on using specific aids and appliances etc. These services must support the child in achieving its annual goals.

(c) Placement

This decision reflects the most appropriate setting at which the child will receive services. The settings could be as varied as a regular class room, a special class within a regular class room to a special unit for children with deafblindness or the child's own home and community setting. This decision is guided by the assessment of the most appropriate place for the child along with consideration regarding the availability of services in the area for such children. It will also depend on the availability of trained personnel to work with this child in the said setting.

Preparing an IEP

Having discussed the various aspects of planning and writing an IEP, let us now write an actual IEP for one of the children.

INDIVIDUALISED EDUCATIONAL PROGRAMME

NAME : Shalini   D.O.B. 11 Aug 1996.

DIAGNOSIS : Blind with mental retardation

AGE: 6 years 8 months

SESSION : 2002 -2003

PRIMARY CARE GIVER : Mother

STAFF RESPONSIBLE : Ms Jyoti

ADDRESS : H.No 234, Royal Park, Link Avenue, Delhi

Telephone Number : 234978871

SPECIAL INFORMATION ABOUT Shalini

Shalini lives with her father, mother, and younger brother. She attends school everyday.

Shalini is diagnosed to be totally blind due to Optic Atrophy. She has normal hearing. She is susceptible to frequent cold and cough. She looks small for her age.

She makes a lot of sounds along with gestures and body movements to express herself. She repeats what she hears. She comprehends the use of simple daily objects used during her routine activities.

Shalini loves to play with her younger brother. She loves coming to school too.

Because of a younger brother at home, her mother is not able to give adequate time to Shalini for her training and interactions. Frequent cold also means that Shalini stays away from school very often.

This is the second year of Shalini coming to school. And one of the major achievements during this period has been her success in adjusting and accepting the school and her teachers. It has helped her to stay away from her mother for short periods during the day.

(Consider that goas are selected after assessment of current level of functioning)

I. ANNUAL GOALS :

1. MOTOR

Use both hands to open and shut taps, water bottle cap, and door knob

Climb up and down stairs using one hand on the railing, turn around staircase

Use fingers for eating, craft, and gardening and kitchen activities

2. PERSONAL

Bite and chew chapatti, bread, apple, chips and mixed rice

Pull her panties and say 'su-su' before going to the toilet

Rub soap over her tummy and arms during bath

Lift and pour water from a mug on tummy, legs, and hands

Stretch her right and left limbs on being prompted during dressing

3. COMMUNICATION

Respond to 3 objects in calendar during the day -- swing – plate – basket (indicating activities outside of classroom)

Make appropriate actions on hearing 'lift your left arm/right arm/legs.

4. SOCIAL

Plays close body movement games with younger brother at home

Identify and indicate for teacher with her name sign along with verbal name during school time

Identify to play with immediate peer 'neeta' by her name sign.

5. COGNITIVE

Match one plate with one spoon and glass during snack time and dinner time

Identify her chair and shelf at school and pillow at home

Choose her favourite snack for the day from 3 choices

Sort and stack/arrange plates- spoons, potatoes-beans, combs-tooth brushes

Make matching actions to nursery rhymes

Identify and indicate use of common objects such as comb, brush, soap, bangles, socks, slipper etc.

6. ORIENTATION AND MOBILITY

Reach the toilet door from her bed/sofa at home

Reach the toilet door from her classroom door at school

Walk along school corridor walls to the play ground, trailing on the wall

Locate and find hidden objects.

7. SENSORY

Identify her favourite dishes – by smelling and tasting

Play with flour, sand, water, packing balls, pulses, wheat grains.

Respond when the school bell rings

Use oil, powder, lotion on her body, brother and mother.

Play with 'Neeta' using body scrubber, foot scrapper, hair brush etc

8. PRE-VOCATIONAL/VOCATIONAL

Collect and keep away plates in basket after snacks and dinner

Pick up vegetable peels after 'kitchen' activities

Hang own bag and water bottle over shoulder

Activity :

- Form specific objectives for a period of 3 months from the above annual goals

- Describe procedures for teaching.

The story of Pinky – Learning throughout the day

Pinky is a six year old girl bubbling with laughter. She comes to a special Unit for deafblind/visually impaired with additional disabilities children everyday. She is diagnosed to have visual impairments with very little useful vision. She also has a hearing impairment but enough hearing to use it meaningfully with the help of a hearing aid. She is also observed to have mental retardation. Her smiles are her greatest attempts to communicate with people around her.

Pinky's learning starts right from the time she gets up in the morning. Her day begins with a little body game activity on her father's stomach right there on the bed. After this game she gets ready to go through the brushing time. And during such time she open and close taps, opens her mouth on being said 'teeth', and tries to chew and bite its her brush. The sound of her auto rickshaw horn at the door indicates time for her to sling her school bag over her shoulder.

As she reaches her school, the familiar voice of the 'guard uncle' at the gate helps her find her way around the stairs to the class rooms. At school she learns to find a hook to hang her bag with the help of the little bow clips that stand for her name sign at the hooks on her chair and on her shelf. Interactions with her teacher and other peers continue throughout the day at different times of the activities and settings. She identifies her own teacher and refuses to go to other adults around her for playing or working with them.

A typical day for her at school includes activities such as trip to the school canteen for purchasing snacks, opening her own snacks packet and serving herself and her peers on plates. Putting away the toys inside the basket after play, gardening using mud, water, sand, leaves and flowers, baskets and little spades to dig. Things collected at gardening time is often used back in the class rooms to 'write' little stories about the garden using the plucked flowers and leaves and remains of the mud and sand. She also receives speech therapy on a regular basis.

The IEP of Pinky mentions about her learning to read and write, count, match and sort and use trailing and auditory clues for the academic session. As shown above, Pinky is reading her story of gardening by reading the objects associated with the activity, and remembering the sequence in which she did the activity. Pinky is also learning to count when she counts up friends around her table, collects snacks plates for them and distribute one 'muruku' to each friend. She is also learning to sort her own toys away from the other things in the class room and match and stack it with her other toys in the basket. She is also learning

to use people's voices to find her way around her familiar school and home environment. Throughout the day Pinky gets endless opportunities to touch, hold and play with things around her in her own hands. The teacher is trying to increase her touch exploration skills.

Besides this, Pinky is in control of the environment around her. She is following an established routine with a particular group of children and adults around her every day. Within her routine, Pinky is making choices on what she wants to do first and what she would like to do later. She is also looking around for things around her and decides with which toys she would like to play with, which packet of snacks she would like to eat that day. Most importantly looking at Pinky one can see that she loves being with familiar people around her. She has the advantage of using all sorts of communication methods including her smiles, little gestures, body movements, tactile symbols and speech and sounds to learning more about the environment around her.

Activity : One group: If you had Pinky with you as a pupil in your set up describe an educational plan that you would make for her for the year ahead.

Raju and his career plans

Raju is a handsome 17 year old young man. He receives training at his own home through a community based programme for adolescents and young adults. He was born with developmental delay due to birth time complications. At the age of 4 years he developed glaucoma. He has undergone a series of surgeries for his eyes. His vision has deteriorated over time. He can see shadows of people and objects around him. Presently he uses speech to communicate with others. He lives with his parents and two younger siblings in a village in Northern India.

When Raju was younger he has spent many years in a 'hostel for the blind boys' in the nearby city. During his time at this school, he spent more than 2 years in each class starting from class 1 till around class 4. While in the class he was learning to use the Braille slate to read and write as per the mainstream curriculum. He was also taught to use the Taylor frame for calculations etc. A major part of the day for Raju would be spent either on his bed playing with his own body or down in the hostel corridors and play ground having a fist fight with other hostel mates.

When Raju was 15 years old, his parents were asked to come and fetch him from the hostel, as it was quite obvious that he would not clear his school board exams. For the next 2 years Raju became violent and abusive at home. He hit at his family members especially mother and younger sisters. He was petrified of his father and would not open

his mouth in front of him. He frequently engaged in self stimulatory behaviour including sexual behaviours. It was difficult for the family and the neighbours to cope with a grown up boy so alien to them, so difficult and unproductive.

With the support of the CBR worker, Raju is getting trained to run his own tea shop at the corner of the village main road. Raju sets up the Tea shop (utensils and stove) every day after sweeping and setting up the stone slab that serves as his shop counter. Raju helps to clean the tea glasses, pour milk and sugar into the containers and encourage customers to drink more cups of tea! He is learning to calculate money that he is charging for every cup of tea that he serves, the total that he earns every day, the amount that he needs to keep aside everyday for milk and sugar and tea powder. He is also learning to use his limited Braille skills to keep records of his budget – income and expenses. Raju is being supported by his mother during the day. She specifically helps in lighting the kerosene stove and mixing and pouring hot tea. In the meantime Raju is gaining skills to do the same.

His transition plan mentions Raju's priority training areas to develop his routine at home with the help of a meaningful occupation. There is an urgent need to reduce his violent and abusive behaviour. The training also focuses on basic work related skills of time and money management, work responsibility, interactions with strangers, particularly customers. The training also focuses on improving his interactions with his father by incorporating more and more positive and healthy situations between the two of them in their day to day interactions.

Quite evidently, Raju is a happy young man now. And mainly because he is in a situation where he has more control over the environment around him. His educational setting addresses his abilities and has designed a curriculum for him that will enable him to become independent in his real environment. The curricular goals are met through activities that are very real and age appropriate for him. Finally he is not being fitted into a classroom where he did not belong in the first place. Today Raju dreams of extending the tea shop to include fried 'bhajjias'.

Activity : One group: If you had Raju with you as a pupil in your set up describe an educational plan that you would make for him from now on for the next year.

Questions to think about :

1. How do we balance between an overall curriculum for a class or group and an IEP for a child within the class or group? Give an example

2. How can we tie activities throughout the day and relate it to the main objectives for a child as mentioned in his IEP

Things to remember :

- The IEP addresses the individual and unique needs of the child with visual impairment and additional disabilities/deafblindness

- The child with his strengths and interests is the focus person of the IEP

- Priority needs and concerns of the parents are also addressed in the IEP

- Evaluation, Curriculum and placement form the three main steps in IEP planning

- IEP is an instructional strategy that helps us to make small, short and realistic expectations from the child.

- IEP covers the main learning activities as well as the child's communication, related services, medical information and major achievements of the child

- IEP is an individual teaching plan for a child , yet moves the child through people, actions and objects around him

PROGRAMME MANAGEMENT

PROGRAMME DEVELOPMENT - THE INGREDIENTS FOR SUCCESS

- Nandini Rawal
- Vimal Tawani

In this sub-section, you will learn about:

- Programme Policy and development
- Various legislation
- Formulation of project proposal
- Resource mobilization
- Monitoring

As a master trainer, you are expected to train a number of trainees. This demands good communication skills in you as well as the knowledge of the content to be imparted.

Programme Policy and Development

Be updated on latest developments, Acts and legislation.

Various legislations pertaining to disability in India

- Rehabilitation Council of India Act (1992)
- Persons with Disability (Equal opportunity protection of rights and full participation) Act 1995
- National Trust Act (for persons with Cerebral Palsy, Autism, Mental Retardation and Multiple Disabilities) 1999.

Formulation of Project Proposal

Expose the trainees to the components of the project proposal, defining needs of the programme, the process of the programme, goals, indicators and evaluation. Help them to draft a proposal under your supervision.

Concept of Sustainability

The simplest definition of sustainability is an organization that can survive over time. Help the trainees to understand the growth process of an organization, the components for ensuring growth over time, the factors to be harnessed for keeping the organization at the current level while providing for its feasible existence in the future.

Documentation and Monitoring

Expose the trainees to various monitoring documents and formats. These will be essential for an information system, data base as well as keeping track of the progress of the beneficiary. Qualitative and quantitative reports will have to be generated.

Resource mobilization

Help them to understand the concept of resources, types of resources, various sources of fund raising, concept of fund raising in cash and kind.

Establishment of Networks

Explain the concept of a network Networking is essential for reaching with services, benefits of net-working, components and dynamics of a network.

Activity :

· A case study of an organization

· Formulation of Project Proposal, understanding of its components

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Things to Remember :

● All children can learn

● Focus on abilities

● Use any approach that works!

● Know and implement your values

● Team work brings versatility to the task

● Monitor, evaluate and change according to the needs

Reference Material :

- Draft on Project proposal writing
- Management Cycle
- Monitoring & evaluation
- A guide for communicating
- Sustainable development makes a sustainable difference
- Roll of Networking
- National Trust Act 1999
- RCI Act 1992
- Persons with Disability Act 1995
- A good sense of humor equals a good presentation ?

EFFECTIVE PROGRAMME MANAGEMENT

- Nandini Raval
- Vimal Tawani

In this sub-section, you will learn about :

- Leadership and Team Building
- Qualities of good leader and trainer
- Training strategies
- Identifying your strengths
- Communication for good presentation

Leadership and Team Building

Have discussion on :

- Qualities of a good leader & trainer
- Training strategies & training styles
- Identification of your strengths and limitations
- Effective presentation
- Communication
- Audience analysis
- How to design and schedule your training
- Training methods
- Evaluation / feedback
- Components of a team
- Identifying strengths of members

Activity :

- Game played with a wooden peg and rings
- Teach a topic to the group.
- Participants to sit in a circle and design a letterhead
- Make an appeal for fund raising for your organization

Reference Material :

- Handicap Vs Ability model
- Community Based Rehabilitation for persons with deafblindness
- Team Building
- Leadership Quality
- Project Management

The various approaches to providing intervention and services

In this sub-section, you will learn about :

- Various approaches
- Beliefs and values
- Mission and vision
- Service delivery models

Think about the following questions :-

- What do you believe in?
- What are the things that you value?
- What are you good at?
- How do you provide services to persons with Deafblindness and visual impairment with additional disabilities (Db & AD)?
- How will you manage these services in the best possible manner?
- Do you understand yourself and your colleagues?
- Do you work well in-groups?
- Do you have systems of reporting?

Using Multi-Pronged Strategies

Beliefs and Values :

- All children can learn
- Parents are a very important part of the rehabilitation process

- Assessment is an ongoing process
- The community can be of great value in the growth of the child
- Children can participate in their communities
- All children can communicate
- Children need a comfortable learning environment

Activities :

- Exercise on writing the 10 most important things in your life
- Exercise in listing 10 most important values that you have

Handicap vs. ability approach

- Look at the child as a whole
- Look at the capabilities
- High light positive achievements
- Compensation for disabilities
- Understanding of the terms disability, impairment and handicap
- Understanding of abilities and skills

Activities :

- Take an example and describe a famous personality like a film star or a sports man. Describe the person's achievements.
- Describe the same person while outlining his limitations.
- Discuss the effect of both comparisons.
- Generalize this activity to two persons with Db & VIAD

Mission and vision of the organisation:

A vision is a dream or aspiration of an organisation

A mission statement is the formal means of defining the basic values of the organization

Encourage students to develop mission and vision statement for their own organisation. You need to have a dream for the organisation and find ways of operationalising.

- What does your organization believe in?
- What does your organization wish to do?

Activity : Prepare the mission and vision of your organization.

Introduction to Service Delivery Models

- Centre based
- Home based
- Community based
- Outreach
- Combination programme

Activity :

- Case studies for showing Db & AD needs, realities and fulfilling of needs.
- Case study and analysis of various service-delivery models

Reference Material :

- Highlights to remember
- Participants Response form
- Reflection form
- What Am I Learning And how will I Use it

Personal Futures Planning

Each student in your program is a unique learner. Assessment is an on-going process. The assessment process attempts to answer questions about how the student learns, and his or her abilities. Assessment leads to developing programs for the student who is blind and multiply handicapped. The student's program and his or her progress must be assessed on an on-going basis. Based on Assessment information changes should be made when necessary.

What is PFP ?

PFP – Person – Centred Planning Approach

- It is a tool for testing
- It is a process-an going problem solving process
- It involves 'person' , family members, friends and service providers
- It is a process of planning that describes capacities and opportunities in people and environments
- It is a visionary and future oriented planning process.

Thus Personal future planning is a process that focuses on :

- Individual strengths
- Needs and desires

- Individual and family
- Planning of concrete steps
- Resources

Components of an Effective PFP process

- People begin with a clear and shared appreciation of the gifts and capacities of the focus person
- Committed people develop a common understanding of a specific positive future : a common dream
- Committed people agree to meet regularly to brainstorm and make commitments to act. These people are often those who spend a lot of time with the person or have known the person for a long time.
- The group includes at least one person – a family member, community member, staff person, advocate or the person who is the focus of the planning – who is champion of the dream. This person makes extraordinary efforts to bring the dream into reality.
- At least one agency or community organization is committed to supporting the implementation of the plan.

Why to do PFP ?

- It brings sense of belonging
- It helps in building relationship
- It is done through team approach
- It includes child in a planning process
- Student/child is a key element in MAPS – process
- Inclusion of family
- Helps in planning concrete steps
- Professionals are helped think broadly

How is a PFP developed ?

Person centered planning as an assessment approach
Future planning is appropriate for young students and older students

Background Map (Personal Profile)

- This provides greatest change for success
- Picture of what has happened in students life
- Summary of key mile stones that have affected their child's life & schooling
- Who is the child e.g. Daya ?
- Behaviour of child

Dream Map

- Parents of children with disabilities usually have lost their ability to dream
- No opportunity to think what they want most from this child
- This enables parents to forget reality for a while and dream
- Provides opportunity to bring out what parents hold in their heart and mind for their child's future

1. Relationship

Who is in the life of the focus person ?

2. Places

Describes community presence, where someone lives, works, visits, etc.

3. Background

What has happened to the focus person till now ?
What is the life pattern ?

5. Preferences

Lists the individual's potential and interests. Also list things not enjoyed or appreciated.

5. Dreams

Personal dreams and desires for the future.

6. Hopes & Fears

Things which look hopeful in reaching the dream. Fears which stand in the way.

PFP Guides a team through :

- Developing a" Circle of Support" for an individual with deafblindness
- Describing a desirable future for the individual
- Developing and implementing an " action plan " with resources , commitment , activities and time lines needed to bring desirable future vision

Activity :

- Participants will focus on a student in their program and make a list :

What is wonderful about _____?

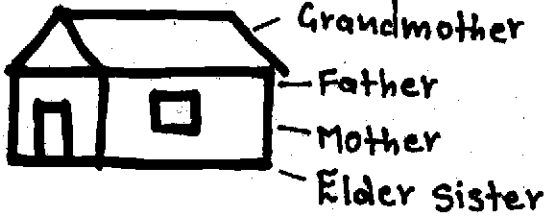- Small group activity – Participants will prepare maps of children from their program

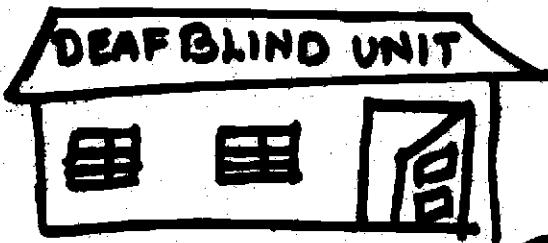# BACKROUND MAP   Oct. 2002.

NAME - Daya
BIRTH - 6.2.96
AGE - 8 years

CIVIL HOSPITAL

Operated for food
Pipe and wind
Pipe - 8th Month

Grandmother
Father
Mother
Elder Sister

Daya Learnt to
Sit   - 1½ Year
Stand With Support - 2 year
Walk
             - 2 Year 6 Month

CIVIL HOSPITAL

Operated for Cataract
at 18 Month

DEAF BLIND UNIT

CIVIL HOSPITAL

Came in Db unit - 2 Year

BERA Test - 2½ year

Heart Surgery
5½ year

Given Hearing aid
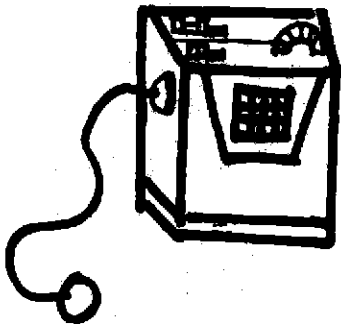
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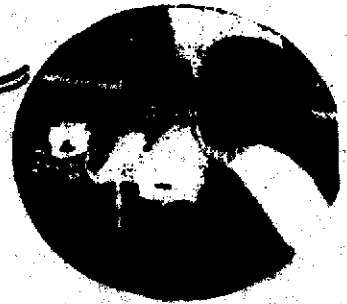

Presently Daya Can :-

Eat Dal chawal — 3 Year

Sign to Eat — 4 year

Using the Toilet — 5 year

Write — 1   — 6 year

uses Signs for her needs — 6 year

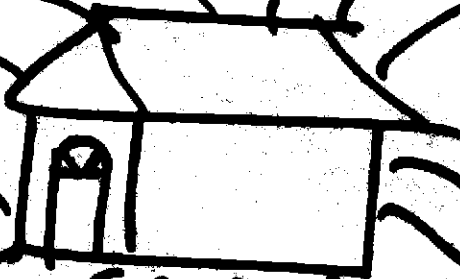# DAYA'S DREAM MAP Nov. 2003

Normal School

Shop
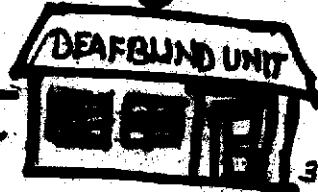
Reading
Writing and
Currency
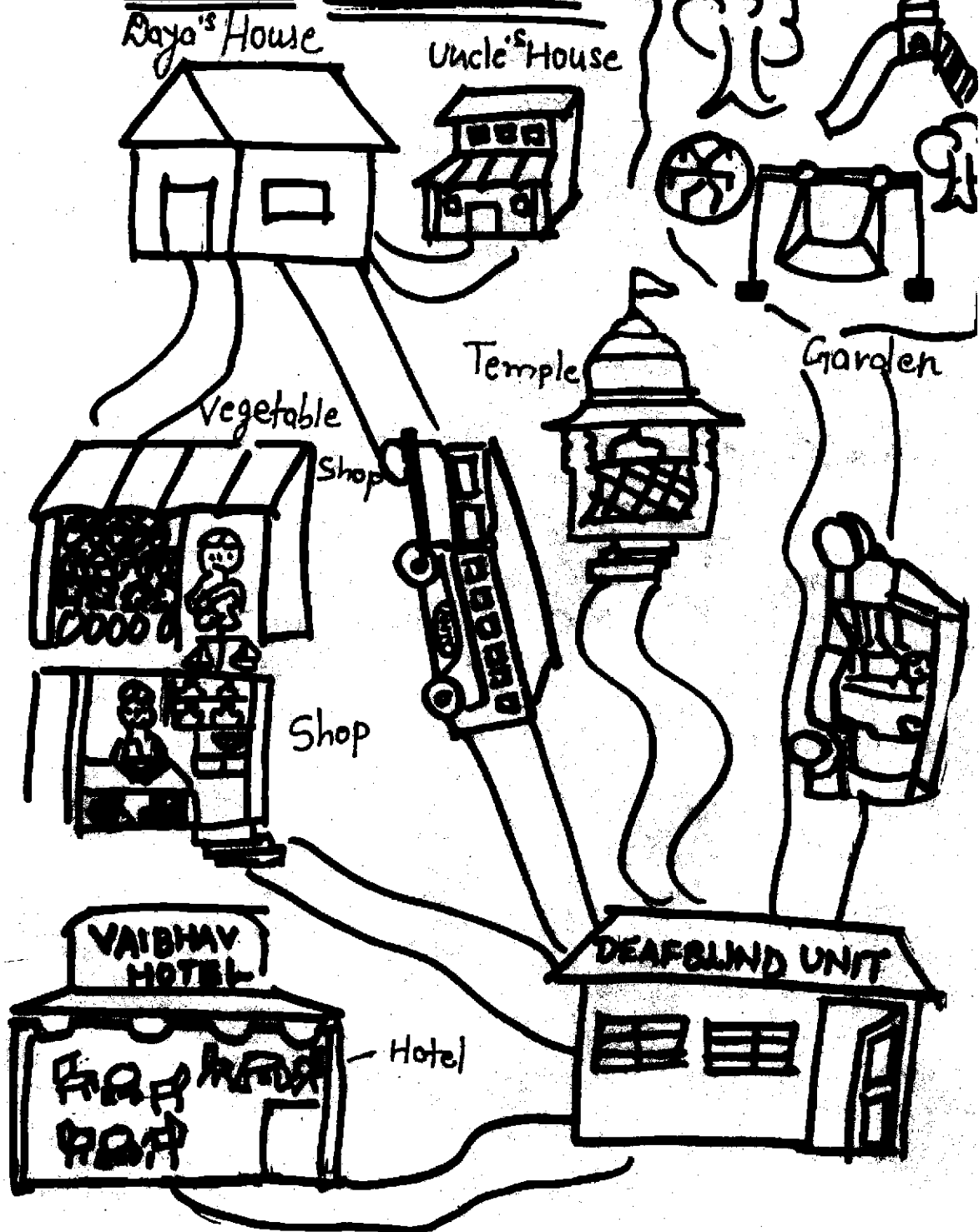Identification

Going to
School and
Come back

etable
Shop

Domestic Work
at home

DEAFBLIND UNIT
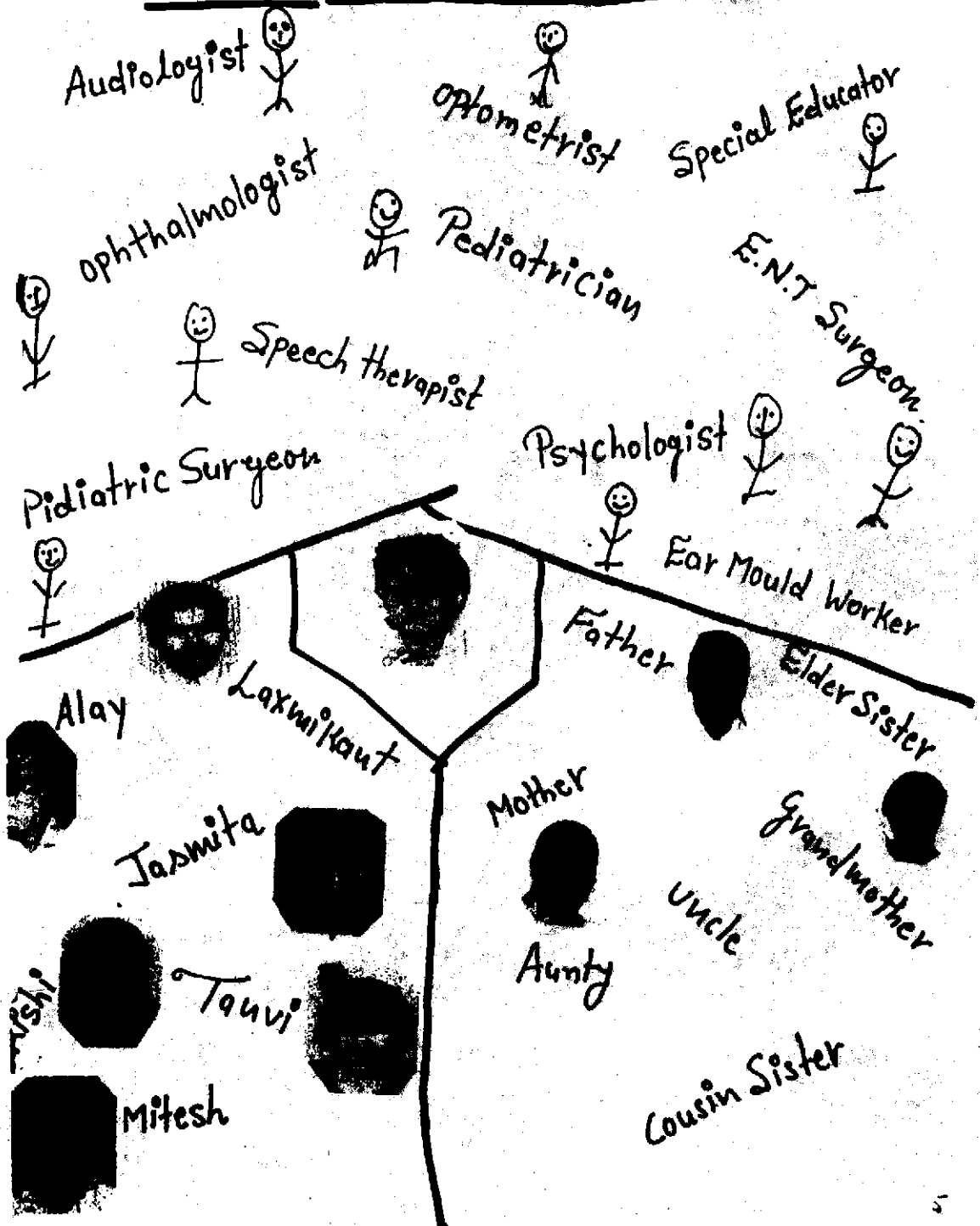
DAYA'S PLACEMAP — NOV. 2002.

Daya's House
Uncle's House
Temple
Garden
Vegetable Shop
Shop
VAIBHAV HOTEL — Hotel
DEAFBLIND UNIT

DAYA'S RELATIONSHIP MAP SEP. 2002

Audiologist

Optometrist

Special Educator

ophthalmologist

Pediatrician

E.N.T Surgeon

Speech therapist

Pidiatric Surgeon

Psychologist

Ear Mould Worker

Father

Elder Sister

Alay

Laxmikaut

Mother

Grandmother

Jasmita

Uncle

...shi

Tanvi

Aunty

Mitesh

Cousin Sister

PREFERENCE MAP Oct. 2002

STRENGTH.

- I can hear loud Sounds with the help of Hearingaid Exp - Sound of Autoriksha, train and Bus horn

- I like to See light in Sensory Stimulation room.

- I can Identify faces of People by using of Spectecals

- I express my needs through Signs.

- I like to play in Water

- I like to eat Sweet Items Exp - Gulabjamun and Icecream.

LIMITATION.

- I Can Communicate only with my teachers and immidiate family members

- I communicate in one word Signs only

- I don't like to write with pen book

- I am able to insily the wool in the hole of Needle help of teacher

- I don't like if anybody takes things.