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Hearing Impaired Children

Deafness or impairment in hearing capacity is defined in terms of degree of hearing loss. Total inability to hear is deafness but those whose sense of hearing is defective but they manage with or without hearing aid is hard of hearing. Deafness might occur before the child acquires language or afterwards due to certain environmental problems.

The medical legal definition of hearing impairment has been in terms of degree of hearing loss and ear problems. These are classified as Mild 20-30 dB; marginal 30-40 dB, moderate 40-50 dB; severe 60-75 dB; and 75 and above dB profound category. The deaf seldom or never profits from auditory training. The hard of hearing are those who have reduced hearing acuity.

Several measures have been undertaken to assess incidence or prevalence of deafness. One of the estimate available from Silverman (1952) that 5 per cent of school children are having different degrees of hearing loss or they suffer from some form of hearing problem. With regard to our country, the National Sample Survey (1981) reported 3.02 million hearing impaired children except for 0-4 age group. Its occurrence is more in rural areas than in urban areas. There is a need therefore not only of early identification but of prevention and care and finally education and training.

It has also been found that the speech of prelingual hearing impaired is slow and of high pitch, with prolonged vowels, rythmic abnormality and defective articulation. They incidence of hearing impairment is more in mates than in females.

IDENTIFICATION

How one would identify the hearing impaired children ? Obviously there are some behavioural indicators and some measurement tools including audiometer. But before the child is referred to an audiometric clinic, certain signs are visible. These are called behavioural clues.

1. Frequent ear aches
2. Fluid discharge from ear

3. Cold and soar throats occurring frequently
4. Lack of equilibrium
5. Inconsistency in following directions
6. Always asking "What" — "What"
7. Observing the lip movement
8. Speech defects
9. Limited vocabulary
10. Inattention
11. Restless and lazy
12. Over acting or withdrawal behaviour
13. Use of earphones
14. Undeveloped or underdeveloped language

TESTING TECHNIQUES

Indentification of hearing impairment is done at different levels. One has to look at the

(*a*) High risk register—This records the history of childhood hearing impairment; inflection from Rubella, defect of ear, nose, throat, cleft lip or palate, less than 1500 gms. of birth weight. In addition to neurologic, there is also neonatal meningitis. After this identification, they are tested by audiological tests.

(*b*) Screening procedure—Sounds are produced at various frequencies when the child is asleep and the capacity of the child is observed with regard to responding to the sound. It is not an independent measure but is a supplementary technique.

(*c*) Cuibogram Technique—In this techniques sound boxes are kept in the crib and a recording device is attached to the bed on which the baby sleeps. When sound at 92 dB is produced at certain intervals the reaction of the baby is recorded automatically.

(*d*) EEG is used to screen the child of auditory response. Audiometric tests and observations of infants behavioural response to various sounds during first six months, followed by audiometric tests are being used in our country.

After an early identification, early interaction and preparation using hearing aids, early stimulation, development of sensory motor skills, auditory training to motor speech, play and constructive activities to develop concepts and abstraction are undertaken. The hearing aid should be very carefully selected to suit to the child's needs. Basic activities are also required to be started for the development of auditory verbal communication. More important is that the child with hearing loss needs to be accepted, in the family first

and parents are to be trained in the use of hearing aid and early stimulation techniques.

ASSESSMENT OF HEARING LOSS USING AUDIOMETER

Human ear is sensitive to respond to a wide range of frequencies which range from 20 to 2000 Hz. It is not equally sensitive to all frequencies nor all speech sounds be perceived at the same level of intensity. The human ear is sensitive to intensities from 0 dB to 130 dB SPL. Various tests have been devised and used to find out solutions to identify the degree of loss in low middle and high frequencies.

The most common tests are : tuning fork tests of Rinne in Germany; Lateralisation tests by Weber, the Bing test for different of conductive and sensory—neural loss, Schwabach tests of sensory neural loss. All these techniques are developed in Germany and are used to identify type of hearing loss not the degree of hearing loss.

Audiometer which was developed in 1920 is an electronic device producing pure tones. It measures the Hearing Threshold Level (HTL), Hearing Level (HL) and Sound Pressure (SPL). An audiogram is prepared by testing the child which indicates the degree of hearing loss. Generally normal hearing sensitivity lies within the range of 10 dB to +20 dB at all frequencies when hearing sensitivity or capacity falls beyond 20 dB at two or more frequencies the person is said to have bearing loss. This may vary from time to time, ear to ear and frequency to frequency.

On the basis of all these *i.e.*, degree of affection, site of lesson, on-set and duration of loss, hearing impairment is classified as mild, moderate, severe and profound. It can also be categorised as conductive loss, mixed loss, sensory-neural loss and non-organic loss, cogenital loss (at the time of birth) prelingual or postlingual loss.

Speech audiometry gives us

(*a*) Speech Reception Threshold (SRT)

(*b*) Speech Discriminatory Threshold (PB Max %)

There are several causes that account for hearing loss.

CAUSES OF HEARING LOSS

Hearing loss may not necessarily be due to organic factors but due to psychological and psychiatric reasons. There has been differential focus. The otologist looks for medical and surgical intervention, an audiologists suggests for amplification and therapeutic management and for an educator or resource teacher emphasis on language development is crucial remedial step.

PRENATAL

Early infectious diseases like Rubella, mumps, influenza of the mother affects the infant's hearing loss. Some research have shown that over dose of strong drugs like streptomycin, quinine, thalicheloride and L.S.D. are associated with hearing impairment and therefore expectant mothers should remain away from those. Maternal malnutrition is another such cause. In addition Rh-incompatibility, emotional trauma, brain fever, brain tumor and certain neurological factors do their part in affecting hearing capacity of the infant adversely.

PERINATAL

Lack of oxygen, use of foceps in delivery, instrumental delivery, premature delivery followed immediately by jaundice, use of anaesthetic agents in delivery do cause hearing problems.

POSTNATAL

The causes which affect hearing loss after birth are German measles, mumps, whooping, cough, meningitis, typhoid fever, encephalitis, infections in nasal cavities, eustachian tube, middle ear infection, ear discharge etc. lead to hearing loss.

There are also some environmental and accidental factors, *i.e.*, accidents, severe burns, toxic drugs, faulty development, emotional depression, exposure to continuous high intensity sounds, etc. Adequate awareness on the part of parents can minimise the cause of hearing impairment in our situation. Early follow up services for checking expectant mother's health and health of the new born can prevent hearing impairment and associated problems.

CHARACTERISTICS OF HEARING IMPAIRED CHILDREN

There are certain behavioural problems which are associated with hearing impairment. They feel invariably inferior and helpless in adapting to circumstances that require verbal communication. They have a poor self-concept which damages the development of personality. They develop temper tantrums and are mostly submissive.

As regards cognitive functioning, the hearing impaired children face deficits in understanding abstract concepts. Because of limited vocabulary they possess poor comprehension ability. They do not have any difficulty in adjusting to social situations. On all the aspects of development *i.e.*, mental, intellectual, personality and educational achievement the hearing impaired children are inferior and are at a lower level. In vocational adjustment they face more difficulties.

Language development of the deaf child differs markedly from that of

the normal. In fact, the normal child learns the language. The deaf child is taught language. They process language and linguistic utterances visually. Whether the child is prelingually deaf or postlingual deaf they behave like deaf children in communication skills. But those who loose their hearing after experiencing speech can be trained a little easily. With training in sound and use of aids the deaf child acquires workable language and speech. The profoundly deaf must receive sound training and prosthetic aids as close to the age of two.

Some of the difficulties the deaf child experiences is learning to read may be explained by the greater problem he has in ordering terms through the process of visual scanning. This ordering and visual scanning are forced by the explicit motor speech pattern. There is no such motor pattern in the deaf to force an order of scanning, unless one is provided by an arbitrary process such as finger movement.

More specifically the hearing impaired children have certain specific characteristics with regard to language.

They have high pitched voice with slow and laboured speech. The vowels used by them are either prolonged or distorted. They display abnormal rhythm in speech. There are nasal sounds, mispronounciations and monotonous voice.

They have limited vocabulary and inability to comprehend, meanings, concepts, feelings, complex structure of language. In written language one often finds problems associated with sentence construction, knowledge, gender, tense, appropriate use of verbs, adjectives, nouns, idioms etc. All these affect the academic growth of hearing impaired children.

EDUCATIONAL PROVISIONS

Home based programmes. Home based programmes are introduced are very early stages for the young infants depending on the degree of hearing impairment, developmental status of his intellectual level, degree of parental involvement. In this, some corrective exercises and stimulating environments are created. The infant is given auditory and speech training. Then after formal assessment is over, they are placed in schools depending upon the category of impairment.

SPECIAL SCHOOLS

Children who have severe disability in hearing are placed in special schools for the deaf. Usually, there is no other alternative. These children follow an entirely different curriculum and they can not keep peace with the normal school curriculum because of their language handicap.

PART-TIME CLASSES

There are mildly hearing impaired children who can profit from regular class room teaching. They are given adequate preparations in some school subjects, personal-special skill development, communication skills. These children spend half a day in regular class and the remaining half in a special class with a special teacher and or a resource teacher to prepare to cope with the regular class works.

INTEGRATED EDUCATION

Children with minimal hearing loss are placed in the integrated classrooms alongwith the regular students. With minimum class room arrangements, instruction, use of hearing aids these children are able to cope with the normal students in the regular classroom. Special assistance is given to such pupils.

VOCATIONAL PLACEMENT

For hearing impaired adolescents vocational placement is decided after assessing his intelligence level, range of interest, aptitude, social maturity and adaptability and communication skills. The vocational counsellor will assist him for appropriate placement. Ordinarily they can adjust to routine works in a sheltered workshop.

ROLE OF TEACHERS AND THE INSTRUCTIONAL PROGRAMME

Hearing impaired children utilise lip-reading or speech reading with clues to facilitate communication. Their speech reading will improve if we can look into and adapt certain precautionary measures while teaching speech reading.

Teachers of hearing impaired children should avoid keeping mustaches, hairstyles, ornaments, beards to facilitate the child to look for cues of communication. They should not cover the face with book while reading a passage to prevent eye contact which aids oral communication. The teacher must face the child while teaching reading and do not make movements unless it is absolutely required. These measures aid in helping the hearing impaired for speech reading. Hearing impaired children get more tired easily. Hence, have short activities, combine visual illustrations with oral activities, work sheets, individual games, physical activities, and relaxation exercises.

A hearing friend often called a 'buddy' helps the hearing impaired child by taking notes for him, pointing out who speaks and what is being spoken. They help them to come back to the correct place in the lesson when it is being taught as they sit near them. Social interaction is also improved by rotating the buddy system in the classroom. If a teacher speaks slowly, the

hearing impaired child gains a lot.

Certain general teaching techniques are to be practised by the teachers of hearing impaired children.

1. Combine visual presentation with oral materials
2. Use handouts for these children
3. Use multisensory approach when necessary
4. Focus on pupil's attention
5. Teach the major portion of the lesson
6. Make a summary presentation
7. Use transition sentences
8. Use short and clear verbalisation
9. Ask questions to check comprehension
10. Explain things and repeat

For accelerating language and oral communication skills among hearing impaired children language experience training should be incorporated as a regular feature in the school emphasising all the aspects of language competence, comprehension and skills of communication. Role playing, Action, illustration cards, pictures, drills, picture-word dictionaries, practice sheets, phonics, structural analysis are to be used. Several language training kits are available and can be profitably used.

Written comprehension and expression can be enhanced by writing simple sentences on a topic and presenting them in a scrambled order and asking the hearing impaired child to rearrange the cards using semantic organisation. They can be given matching exercises, ordering of experience, questions regarding what, when, where and how. Hanging of charts in the room also speed up the language acquisition.

For mathematical ability, training in use of abacuses, plastic chips, coins and other small objects, value boxes, number lines, playing cards, semiabstract materials facilitate learning. Hearing deficient children are not poor in abstract and conceptual ability but because of language deficit their overall performance is retarded.

Speech therapy has been recommended for reinforcing speech and sound patterns. Close communication with speech therapist will result in consistent and concentrated programmes. Use of hearing aids individually and group hearing aids in the classroom facilitate instruction and learning.

Providing education and training to the hearing impaired pupils is a challenge not only to the regular classroom teacher but to special teachers as well. A consistent attempt, monitoring and feedback on the performance of hearing impaired children is needed. The parents and community have also great role to play in accepting such children. IED and the resource room

teacher plan are positive steps in bringing hearing impaired to the mainstream.

REVIEW EXERCISES

Answer the following questions within 500 words each :

1. What is hearing impairment ? How would you identify a hearing impaired child ?
2. What are testing and assessment procedures of the hearing impaired children ?
3. State the causes of hearing loss.
4. State some of the behavioural signs for the hearing impaired children.
5. What are some of the educational provisions for the hearing impaired children ?
6. What are the characteristics of hearing impaired children ?
7. What is the role of teacher in the integrated setting ?

Answer within 50 words each :

1. High Risk Register
2. Screening procedure
3. Cribeogram technique
4. Audiometer
5. EEG
6. Special school
7. Integrated classroom

Fill in the blanks :

1. Mild hearing loss is within 20 and.....dB.
2. Marginal hearing loss is within 0.....40 dB.
3. .....hearing loss is within 40 and 50 dB.
4. .....hearing loss is within 60 and 75 dB.
5. Profound hearing loss is above.....dB.

Write whether the statements are True or False :

1. 5 per cent of school children have hearing impairment.
2. Hearing impaired children have frequent ear aches.
3. Hearing impaired children have no problem of equilibrium.
4. Vocabulary of hearing impaired children are poor.
5. Hearing impaired children are overacting.

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Visually Impaired Children

Visual Impairment is defined in terms of visual acuity, field of vision, and visual efficiency. Visual ability is the ability of eye to see distant objectives clearly which is assessed using the Snellen Chart, developed by Herbart Snellen, a Dutch doctor. If the chart starts with a big 'E' which a normal eye can see at a distance of 200 ft. If the vision of the person is so impaired that to see it clearly it has to come within 20 ft. or nearer, he is then considered legally blind. The individual is able to counting of fingers at a distance of 1 metre. His vision is assessed as 20/200 in the better eye. It simply means a legally blind person sees something in 20 ft, distance which can be seen by a normal eye at 200 ft. easily, in the better eye after correction. The normal field of vision is 180° in the better eye with correction. But if it is 20° or less, it is blindness. To him, a very limited field would be visible. Visual efficiency means how will one can use his vision. This means how the visual information is processed, analysed and interpreted in the brain. This part is educationally and rehabilitation purpose wise more viable.

Functionally visual impairment presents a different problem. There are children who have low vision or residual vision. The children can read large prints, and sometimes are not benefitted by visual aids in reading and writing. These children are partially sighted and their visual acuity does not exceed 20/70. But as opposed to touch reading they use print. Low vision and partial sightedness are not synonymous. Low vision is defined in terms of clarity reduction whereas partial sightedness is defined in terms of distance from the Snellen Chart.

Educationally speaking, blind children are those visually handicapped children who use Braille, and partially seeing are those who use print.

Besides, clinical assessment, how can a teacher undertake functional assessment ? There are certain tips for teachers.

BEHAVIOURAL SIGNS FOR IDENTIFICATION

The child rubs the eyes excessively, has watery eyes, reddened eyelids etc.

He covers one eye and tilts the head forward; holds objects and books close to his eyes; asks other children when taking notes from the blackboard;

Blinks more frequently; Squints eyelids together; Crossed eyes; complains about headache following close eye work; Bumps into objects or people.

There are also certain other body clues :

1. Making head forward and backwards while looking at distance objects, and a rigid body.
2. Frowning or loosing the place while reading or writing.
3. Closes one eye or cover one eye.
4. Difficulty in coping with blackboard.
5. Poor eye-hand coordination.

Assessment of Visual impairment

The following tests are used :

1. Interim Hayes-Binet for IQ Age 6 +
2. Perkins-Binet-Carl Davis-revision
3. WISC—R
4. The Blind Learning Aptitude Test (BLAT) (CA 6-20)
5. The Haptic Intelligence Scale for Adult Blind
6. Koh Block Design Test
7. WAIS (Verbal)
8. The Slosson Intelligence Test
9. PPVT (Partially sighted)
10. Illinois Test of Psycholinguistic Abilities
11. Bohem's Test Basic Concept

Behaviour and Social Development

1. Bayley Scales of Infant Development
2. Denver Development Screening Test
3. Maxfield-Buch Holz social maturity scale for blind pre-school children.
4. Wide Range Achievement Test

Vision

Visual Efficiency Scale
Evaluating Functional Vision
Snellen Chart

Indian Tests

C.M. Bhatia—Performance Tests of Intelligence
Vithoba Paknikar Performance Test for the Blind—K.K. Paknikar (1978)

Causes of Impairment

The causes of visual impairment can be classified as *Ocular, General,* and *Injuries.*

Ocular

Congenital and developmental disorders have been stated to be one of the major causes of visual impairment in children. These are :

Anaphathalmia. In which eyes do not develop at all.

Microphathalmia. In which eye ball is abnormally small.

Oxycephaly. An anomaly of the skull bones resulting in optic atrophy.

Antridia. In which the iris fails to develop and visual acuity becomes poor and there is rapid involuntary movement of eye ball.

There are various other eye disorders : Byphathalmia, Albinism, Retinoblastoma.

Congenital Cataract— due to Rubella infection. These are certain congenital and developmental anomalies. But there are other eye diseases which impair visual acuity.

Conjunctivities — of the new born which is now prevented just after birth by droping 1% Silver Nitrate Solution to the baby's eyes.

Sometimes there is a *fibrous* mesh behind lens (*Retrolental Fibroplastic*). It is caused due to excessive use of Oxygen to premature babies while in incubators.

Trachoma — Results out of crowding home conditions and as a result of chronic contagious disease of conjunctiva and Corvea.

Glaucoma — It is a potent factor of blindness in middle ages. In early stages, it can be cured.

Cataract — Although it is a disease of old age, yet it can occur at any time due to rupture of the lens.

GENERAL DISEASES

Syphillis is considered one of the common causes of blindness in India. It is hereditary in origin and it becomes manifest during 5th and 15th year of life. Atrophy of optic nerve is associated with neurosyphillis. Chronic diarrhea is also a cause of blindness in rural India. Substitence on barley water results in loss of vitamin-A which softens the cornea. Hypertension, diabetes, kidney disease cause visual impairment.

Malnutrition is the cause in most cases not only for visual impairment but also for several sensory and cognitive dysfunction. In a country like ours

malnutrition and ignorance about eye care cause blindness. Especially deficiency in vitamin-A, vitamin-B, B2, C, D are also associated differentially in visual functioning depending upon the degree of deficiency.

Injuries and accidents especially which create trauma and are chemical disturbances or burns, tobacco, methyl alcohol, dyes, paint, carbon monoxide, lead, etc. cause eye problems.

WHAT CAN BE DONE TO PREVENT AND CURE VISUAL IMPAIRMENT ?

Blindness is preventable if care is taken in time. The care is both medical and mass educational. In our country, poverty, malnutrition and ignorance are main causes of visual impairment. Health of the mother during pregnancy is also of primary importance. Distribution of vitamin-A to children is most suitable measure. Toys with needle points, or made of tin should not be given to children. As far as possible, they should not play with airguns, bow, and arrows. Care should be taken.

Eyes should be washed with cold water every day as many times as possible. Do not rub eyes excessively. Don't apply anything to the eyes without Doctor's advise. Errors of refraction or balance should be corrected early. Illumination of the classroom should be free from glare and flicker. Prints for reading should be spaced for avoiding eye stain.

CHARACTERISTICS OF VISUALLY IMPAIRED CHILDREN

Vision is the most actively used sense by man. Hence, cognition depends upon his visual experiences. Blindness imposes three basic limitation on the individual.

Blind children are experientally deprived in terms of range and variety of experience.

Their ability to get along is also limited because of restricted mobility.

They are unable to control one's own environment and oneself in relation to it. This is a significant deficit. Community attitudes and reactions depends upon tradition, culture and belief. Gradually with advancement and progress in welfare activities attitudes are changing from brutality to welfare and sympathy. Still there are certain stereotypes which reflects in terms of attitudes and responses. People still believe that blind person is nothing, can do nothing and can be nothing. They thus have a low self concept, poor personality make up low n-ach.

Sometimes, parents feel that blind child is born due to the result of some sin. Therefore he is ignored and not taken care of. Neglect causes certain personality problems. The child has to develop certain personal self help

skills. Overprotection is also dangerous. It denies the child all kinds of natural demands. The blind child suffers from behavioural deficiency because of extreme neglect or overprotection.

INTEGRATED EDUCATION OF VISUALLY IMPAIRED CHILDREN

A visually impaired child in the regular class in one among many children in that class. The curriculum should be same. But the visually impaired child receives the information predominantly from touch and hearing. Hence, there is no need of special curriculum but approach to teaching should be *multi-sensory* and he should be exposed to a *plus curriculum.*

General curriculum should be explained in terms of nonvisual experience. *Duplicate* experience, *modify* experience, *subsfitute* experience, and *omit* lesson.

Plus curriculum is not extra but compensatory. This skill development always facilitates better learning. Areas of special plus curriculum include :

(*a*) Braille
(*b*) Orientation and mobility
(*c*) Daily living skills
(*d*) Sensory training
(*e*) Social skills for integration
(*f*) Use of equipments

Curricular activities should include intellectual activities (music, debating, writing etc.) combined physical and intellectual activities like exercises, dancing can be developed in blind children. *Slow pace* should be the criteria for teaching the blind children in an integrated setting.

In the integrated education setting we have no right to change the curriculum but what one can do is to take the experiences of the blind child very nearer to that of the normal child through modified experience, resource room teaching, remedial instruction, and multisensory approach. There should be a thorough understanding between the regular and resource room teacher.

Primary Level

1. Teaching of Tactile discrimination
2. Auditory discrimination (use of Bell Ball) blind folding
3. Plus curriculum—Spend more time in resource room, individual instruction, on to correspondence
4. Note taking habits — Teacher should not insist
5. Presentation of material

6. Evaluation
7. Supportive services — Effective involvement of parents, resource room teacher, regular teacher

The resource room Teacher ought to teach :

1. Introducing Braille
2. Braille writing
3. Touch sensation
4. Hearing skills
5. Daily living skills
6. Pre-cane mobility skills
7. Mathematical concepts and *abacus*

Indirect Services at Secondary Level

1. Teaching mobility skills using long cane
2. Teaching mathematical concepts and embossed diagrams
3. Remedial Teaching for slow learning visually impaired children.

Resource Room

A resource room forms a part of the integrated education programme when there are sufficient number of visually impaired children. It is necessary for

(*a*) Preparation of material
(*b*) Teaching plus curriculum
(*c*) Locating the Braille materials
(*d*) Remedial teaching

A resource teacher is not a subject matter specialist, but a specialist in teaching skills and integrated education peculiar to blindness. They should have a minimum knowledge of the subject matter. He may discuss the matter with regular teachers and act accordingly. Regular teacher can also engage these children in remedial instruction. There is no hard and fast rule regarding the nature of instruction in the resource room. It may consist of

(*a*) Before classroom instruction
(*b*) In between classroom instruction
(*c*) After classroom instruction — Everyday follow-up may be necessary for some children

Teachers should have the patience to practice with persistence

Equipments Necessary for Resource Room

1. Braille writer for teacher
2. Braille slates and stylus for pupils
3. Abacus for teaching math
4. Braille sheets of paper

5. Classroom furniture
6. Low vision aids
7. Large print books
8. Bulletin boards (Braille)
9. Braille books
10. Hammer, saw, pliers etc. for teaching Industrial Art
11. Tape recorders and cassettes
12. Duplicating machines (Braille type)
13. Teaching aids

TEACHING DAILY LIVING SKILLS

The visually impaired children are taught eating, tailoring, dressing, body hygiene—cleanliness, body hygiene—personal grading, taking bath, washing clothes, handling money, shopping, using electrical appliances, using telephone, shaving, food preparation, clearing a place, and using medicines.

ORIENTATION AND MOBILITY

Sense of hearing, touch, smell, taste, kinaesthesis have to be developed by using different techniques such as :

Guide dogs; sighted guide techniques; long cane techniques; safety techniques; and electronic aids for mobility, laser cane, yields beam of light, infra red light to detect objects and a pair of glasses known as Sonic guide, which is mounted on ultrasonic sensors.

Visually impaired children may need assistance in mastering the school environment. The following activities are helpful :

Magnifying glass and or spherical lens can be provided for students with low vision aids to answer and correct their own scripts.

Several factors should be considered for providing appropriate environment to the visually impaired children.

- — Illumination should be bright, diffused and free from glare and shadows.
- — Figure and ground is a must especially for partially sighted pupils.
- — Up to a point the larger the print the better it is for pupils to see. If it is very large pupils can not see it at all.
- — Pupils with visual impairment should be asked to sit close to balck board.
- — Blue and white stencil, multi-coloured chalks, and grey pencil and difficult to see.

A normal classmate can work as a 'buddy' for visually impaired children and assist him in drills, taking, tutoring him, creating awareness of what is happening.

For developing concept in visually impaired children one should use concrete experience. Visually Impaired Children should be helped to associate words with tactile experience.

Structured activities where pupils can learn by doing and experience and teaching them by units are helpful. Integrate various study units to help the pupil get wholeness of life.

THE ROLE OF TEACHER

Regular classroom teachers do not have to learn braille but for the partially sighted children they have to make certain arrangements in the classroom. For example, use of magnifiers keeping background noise minimum, furniture can be adjusted to make maximum visual efficiency. Visually impaired children rely on sound to a great extent. Hence teacher has to use distinct sound during reading instructions. Children must learn to focus attention on all letters of a word. Use of large print materials also aid learning for the partially sighted. Talking books, cassette players, audio tapes, strips are available. Compressed speech recorders are also available.

Different instructions are necessary for teaching different curriculum areas. For Mathematics :

1. Use clips, spools, magnetic boards, use different arrangements.
2. Whatever you write in the board provide a desk copy.
3. Teach mental arithmetic
4. Use an adapted abacus
5. When you teach through pictures, lines use dark chalk or pencils and preferably use 2 or 3 dimensional models
6. Embossed graph paper slide rules are available. Raised clock and talking calculators are available.

For writing tactile materials are to be used. Hence, pupils use a stylus to write letters. Kinaesthetic feedback is desirable. Papers with raised lines help writing skills to develop.

For spelling skill — Articulate the words clearly. Point out the visual aspects of the words. Give oral spelling tests, practice spelling lists on a type writer. Repetition improves spelling and typing skills. They can listen to audio tape.

Occasionally visually impaired children display deficiency in social skills. This is due to lack of experience and over protections. They should be rewarded verbally for any social gesture and seer acceptance have to be encouraged. Verbal cues can be provided to partially sighted or low vision children. Allow them to speak to the class. They have to develop their self confidence.

Use of multisensory materials have added advantage for the Visually Impaired pupils. Commercial kits and language master are also available. Television also provides a source of multisensory learning. Computers has also come to the service of the disabled. In teaching visual impaired children one must remember that each child is unique. Each has strength and weakness. His handicap should therefore not interfere with teaching him to grow up.

DEVELOPMENT OF VISUAL EFFICIENCY IN PARTIALLY SIGHTED

A teacher should practice the following to develop visual efficiency of low and partially sighted children.

1. Expose the children to various lighting condition; encourage children in seeing, discuss what they see; increase vocabulary.
2. Give enough time to observe; provide coloured lights, and present attractive toys for identification.
3. Draw pictures/figures and ask the child to trace/move along, and may be asked to follow rolling ball, light etc.
4. Discriminate 3 dimensional objects; teach gradation in size; teach names of colours and teach intensity concepts.
5. Use flash cards; increase memory, complexity and decrease duration, and specify order.
6. Draw form in dotted lines; draw forms free hand; throw and catch ball, and reinforce vocabulary.
7. Find omission of parts and present objects in ascending/descending order.
8. Teach form constancy
9. Teach figure and ground discrimination
10. Teach visual motor cordination — paper shapes, clay modeling, folding paper, bead-stringing, tracing, wearing ropes.

These measures help the partially sighted children develop competence and they gain much from schooling.

REVIEW EXERCISES

Answer the following questions within 500 words each :

1. What is visual impairment ? How would you identify a visually impaired child ?
2. What are the testing techniques used for assessing the visual impaired children ?
3. What are the characteristics of visual impairment ?
4. What are the educational provisions for helping the visually impaired children ?
5. How would you develop visual efficiency in partially sighted ?

6. What equipments are necessary for the resource room of visually impaired children ?
7. How would you teach mobility and daily living skills to visually impaired children ?
8. What are the types of visual impairment and their etiology and prevention ?

Write your answer within 50 words each :

1. Trachoma
2. Glaucoma
3. Cataract
4. Plus curriculum
5. Multisensory approach
6. Orientation and mobility
7. Classroom arrangement for visually impaired

Fill in the blanks :

1. Visually impaired children.....more frequently.
2. Visually impaired children.....their eyelids together.
3. Visually impaired children.....into objects and people.
4. Visually impaired children have.....eye hand co-ordination.
5. Visually impaired children tilt forward and close.....eye(s).

Write whether the following statements are True or False :

1. Snellen Chart is used for identifying V1.
2. Visual acuity of V1 is 20/200 in the better eye.
3. The normal vision is 180° in the better eye.
4. Blind children use Braille.
5. Partially sighted children use print.

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Underprivileged Children

The term 'underprivileged' seems to be only a variation on the theme of slow learners, under achievers, culturally deprived, socially disadvantaged, culturally different but it is hoped that it will be more than just another euphemism. To me the term 'underprivileged' means children, who come from socio-economically backward section of the community who cannot profit from school because of deprivation of one sort or another, and children who are seen in interior tribal and rural areas of country where educational facilities have not reached in the way we find them in a metropolitan area.

In other words, the term underprivileged would include, children who not only belong to the above criteria but children who are exposed to disadvantaged schools in the rural and slum areas. Hence, both the ecology of the family and the ecology of the institution contribute to educational deficits of the underprivileged. This feature has been very well discussed in a paper by Prof. Robinson (1976), who advocates micro and macro-sociology of education for the underprivileged. Prof. D. Sinha also makes a strong plea for an ecological model of cultural deprivation (1977). In addition, it is also emphasised that perceived awareness of poverty be it environmental, economic, affective or psychological groups a number of children in rural and urban slums to the category of the underprivileged. One of the prevailing features of modern society in rural area and slums is poverty of one sort or another and as such for the education of underprivileged a new sociological perspective is needed. Our constitutional directives for universalisation of school education will be really achieved not only by providing equal opportunity for enrollment, changing the quality of facilities, increasing the teaching personnel and services provided or through shifts in curriculum but significant improvement in the quality of guiding teaching and learning processes. As a matter of fact, when wastage and stagnation would be taken care of, the school attendance approaches 100 per cent of the school age population and the school draws increasingly from the bottom of the pile. The able, the adjusted, the motivated, the upper 30 per cent in ability, have

always been in the school and the schools have taught them fairly successfully. Now we have to deal with those who are less equipped intellectually, motivationally, economically to cope with the school culture and expectation and even may seem hostile to what school represents. This segment of the school population is the underprivileged. In fact, if we predict the drop-out rates to be reduced in the immediate future, we can say in the same tone that the school population will increase exactly in the same proportion contributing to heterogeneity and children from underprivileged sections of the community will be more in number.

Cultural deprivation or underprivileged refers to a complex set of conditions which create intellectual deficiency in a child. Some of these conditions are attributed to unstimulated environment, lack of verbal interaction with adults, poor sensory experience, and other deleterious environmental factors generally associated with poverty. The term underprivileged is used to indicate.

(*a*) Progressive decline in intellectual functioning.
(*b*) Cummulative academic achievement deficits.
(*c*) Premature school termination and high dropout rate.

CHARACTERISTICS OF UNDERPRIVILEGED CHILDREN

Before we think of a teaching strategy for the underprivileged, let us know what are the characteristics of the underprivileged children. These children show poor academic performance, high drop-out rates, reading and other learning disabilities, and have adjustment problems. Socio-economically backward children practically show every such index. They have lower grades, their health is poor, and they have deficiencies in the two most skills reading and language, necessary or success in school. They have minimal training in disciplined group behaviour and educationally are less ambitious. Children from such environments are apt to have various linguistic disabilities. They also show incapacity in cognitive processes such as : the ability to observe and stating sequences of events, perceiving cause and effect relationships, classifying concrete objects, attributing responsibility to self and in general have poor self concept (Das, 1973, Panda, 1971, Sinha, 1977). The combination of nonverbal orientation and an absence of conceptualisation very well account for their intellectual deficits and deficit in cognitive skills or in Piagetian terminology, formal logical thinking is absent in all such children or appear very late in the development. The consequences of the cognitive deficiencies are again complicated by their pattern of motivation and attitudes. Psychologists explain that these children have a feeling of alienation induced by family climate and experience combined with a debilitatingly low self concept. They tend to question their own worth, to fear being challenged, and to exhibit a desire to cling to the familiar. They have

many feelings of guilt and shame. These children are vary, and their trust in adults is limited. They make trigger like responses and are hyperactive.

They are quick to vent their hostility orally and physically. In other words they apathetic, unresponsive and lack initiative. It is difficult for them to form meaningful relationships. Although these characteristics are rooted in early childhood family back-ground and social class membership of the family etc. Yet the attitudes of the teacher and the curriculum in the school increase the alienation of these children. Very often there is a communication gap between the teacher and the students, the objectives of instruction and the actual evaluation of instruction in terms of pupil performance as well as discontinuities in the meanings attached to verbal cues employed in teaching and curriculum materials and the meanings which these children have acquired in their out of school experience. A few teaching-learning problems have also been discussed by Rath (1974). Hence, in the educational provisions for the underprivileged, the task of the school should also be redefined not as a cause for contributing to deficits in these children but as an institution in the best position to affect the change. The pre-school programme and compensatory programmes for the education of the underprivileged can work best at the hands of these teachers.

The interest for research on cultural deprivation came from researches on early experience and sensory deprivation in comparative psychology. Hebb (1949) demonstrated that animals raised in restricted environment showed deficits in sensory and perceptual development; Hunt (1961) extended the implications of this to humans and pointed out the importance of early experience in scholastic attainments. Haywood and Tapp (1966) stated that an enriched early environment increased intelligence, whereas impoverished environment may lower the intelligence level.

The lower achievement of disadvantaged children could be attributed to atleast five causes : malnutrition, genetic, lack of stimulating early experience, social motivations and cultural values. In addition, the cognitive style or strategy adopted by a group may account for the lower performance of the disadvantaged children (Panda, 1970). Jensen (1971) has demonstrated that children from low SES use associative learning strategies and evidences are found to suggest that low SES children use sequential processing than simultaneous processing (Das, 1993) in tasks which demand simultaneous processing.

Das and Singha (1975) have suggested a general orientation for explaining performance deficits in low SES children. Following Luria one may view scholastic performance as "a social phenomena in origin and as processes fromed during the course of mastery of general human experiences". They are shaped by the experience through which a subgroup passes. Cole

and Bruner (1971) essentially made similar observations, "that the most important thing about any" underlying competence is the nature of the situation in which it expresses itself".

Besides the gap between a culturally disadvantaged child and a normal child begins to grow with age and exposure to classroom learning. Achievement tests and verbal ability reveal wider gap between the Black and middle class White as they progress in school years. Implications from animal studies can not be drawn for the culturally disadvantaged child because the slum child does not suffer from understimulation but from over stimulation. Hence, it is not stimulation perse but the quality of stimulation that is important. In fact, the verbal milieu in which the middle child grows up corresponds much more closely to school learning situation. Moreover, the middle class child most often has a superior quality of both verbal and nonverbal stimulation at home. The stimulations are distinct and the reinforcement system in a middle class home are of a delayed kind which is congruent to life and classroom situations.

In India, social and cultural disadvantage is not very clear cut. All low income group children are not necessarily at disadvantage. The high caste is supposed to have a culture superior to that of the low caste Harijan given the same low economic status. The cumulative effect of these widens the gap between Brahmins and Harijans. There are empirical findings which support the cultural effect of a high caste home.

The rich high caste parents showed significantly greater interest in the child's educational progress. They had knowledge of child's educational progress and showed higher aspiration of the children, and also made preparations for the child's education. The poor non-orthodox Brahmins were similar to the rich Brahmin which was a bit unexpected. The orthodox high caste and poor low caste and similar but low expectations. May be orthodox parents do not value expectancy so much. No difference in personality was observed although the authors expected that low caste children would be more fatalistic (Das and Singha, 1975).

The results failed to support that birth in the Brahmin caste had an absolute advantage in cognitive abilities. Economic prosperity on the other hand, reflected more of an advantage than high caste birth. In other words, the least disadvantaged children performed best in a majority of cognitive tasks. The poor Brahmin and Harijan children did not differ significantly possibly because they all came from the capital city *i.e.*, an urban environment, which is varied an stimulating and the Harijan children have grown up in such an environment. Consequently the disadvantage of belonging to a culturally deprived home is greatly compensated.

Panda and Das (1970) examined the relative effects caste and class as

factors influencing performance on stroop test and two verbal conditioning tasks. One hundred and sixteen boys aged between 8 and 10 years were used as Ss. They were reading in grades 4 to 6 in the same schools. On the parental income and caste they were divided into Rich (R) and poor (P) Brahmins (H) and Harijans (L). Each of the four groups HR, HP, L and LR had 29 Ss with comparable mean (from 9 to 9, 6 years and grade.

Belonging to high caste and to the high economic class seems to be associated with faster reading speed. The superiority of the high caste over the low approaches a statistically significant level but it was consistent with an earlier finding (Das, Jachuck & Panda, 1970) and may be traced to the scholastic traditions of in high caste homes. The rich poor difference was not obtained in the earlier study in which the groups were much closer in income. When the contrast in the economic levels is increased, the rich have an advantage over the poor in reading speed..

Das, Jachuck and Panda (1970) raised a few fundamental questions relating to cultural deprivation and cognitive growth. Is incompetence largely determined sub-culture to which a child blongs at birth ? Is it stamped in fortuitously because of his indelible identity with a certain caste and class ? Does this disadvantage affect the child's cognitive growth adversely?

The cultural milieu in this reference is the caste to which a child belongs. The children were drawn from the Municipal schools of the City of Bhubaneswar. The children of Brahmin caste constituted the High caste and Harijans represented low caste group as usual. Rich and poor classifications were done on the basis of parental income. A child was included in the poor category if his parental income is less than Rs. 200/- p.m. The children of professionals were included in this high income group. The children belonging to Rich Brahmin, rich Harijan, poor Brahmin, poor Harijan were in the age group of 9-12 and were given Raven's progressive matrices test, stroop test, a test for short term memory, and a recognition test. Except for RPM the rest of the tests were administered individually.

Progressive matrices scores were available for the rich Brahmin, poor Brahmin, rich Harijan and poor Harijan. The mean scores for these groups were 22.22, 19.30, 19.38, and 17.22 respectively revealing a hierarchy of rich Brahmin at the top, poor Harijan at the bottom. It seems as though the Harijan has compensated for his low caste status by wealth as much as the Brahmin has lost his advantage by poverty.

In reading speed the Brahmins excelled the Harijans regardless of economic status, whereas in colour naming speed the rich were superior to the poor. Short term memory scores were available for 27 rich Brahmins, 25 poor Brahmins, and 28 poor Harijans. Other 58 dropped out from school and

could not be traced. Results of t-test showed significantly poor recall scores of the Harijan sample compared to poor Brahmins and rich Brahmins. The study of course did not answer whether Harijans had a poor capacity for recall or inefficient coding in STM task.

The recognition experiment yielded two scores for each subject : correct recognitions for unimodal and crossmodal task. Harijans committed a large number of errors in writing auditory material. These errors would obviously make it hard for the Harijan child to profit from classroom instruction. Harijan children were found to have relatively less facility with cross-modal coding than with uni-modal coding, although they shared this poor Brahmin children. From the results it appears that belonging to a low caste appeared to account for the inferior performance of a child in some cognitive task. It seemed as if caste were one's destiny.

Equalising the school environment failed to minimise difference in the cognitive or intellectual domain but reduced the personality difference to a considerable extent.

Evidence of the low deprived children doing better than the non-deprived group has come from the studies of Tripathy and Mishra (1975). They found that on six tests of cognitive functions and mental ability the low deprived group did better than non-deprived group. Castewise analysis did not show any difference, implying there by that S.C./S.T. did as well as the born highs. Rath (1973) also confirms that on the basis of intelligence that there were no difference among children born Brahmin, Scheduled Caste, and Scheduled Tribe. Gokulanathan and Mehta (1972) reproted higher n-ach for tribal than non-tribal high school children. Mehta (1969) did an extensive and intensive study supported by NCERT on the achievement motivation of tribal and non-tribal high school boys. The results corroborate the above conclusion that tribals are high n-achievers than the non-tribals.

Sinha (1973) similarly observed that the general performance level of children of schools where children from economically inferior homes went significantly inferior to schools which admitted children from well-to-do and upper middle class families. The test required interpretations of certain perceptual cues. It was also seen that within the same type of school scheduled caste children were inferior to their non-scheduled classmates on tasks requiring simple and complex perceptual skills.

Recognition vocabulary, vocabulary of use, length of remark, and complexity of sentence forms in disadvantaged children are all significantly below norms findings which are consistent with Bernstein's differential encoding process.

Underprivileged children lack persistence in a school related task and evidence a lower sense of control over the environment than the advantaged children. The achievement discrepancy score is very high in case of the disadvantaged group (Crain *et al.*, 1972). Academic achievement is related to a personal style dimension which Kagan has labelled reflectivity-impulsivity. The more reflective response tendency is related to higher reading achievement and social class.

Intellectual achievement responsibility is highly related to academic achievement and children of low SES do not have a sense of personal control. Research investigations of Crandall, Katkovsky, & Crandall (1965) have demonstrated the validity of this assumption. Negro children and also lower class White children are more externally oriented and their achievement index was too low compared to advantaged Whites. In our studies Panda and Lynch (1974) and Das and Panda (1977) similar trends have been obtained.

To what extent deprivation affacts performance of these young pupils over a variety of situations having different educational relevance and achievement related dynamics (Das and Panda, 1977) ?

On intellectual achievement responsibility attribution in failure situations the high caste children were more internal and Harijan children were more external. The Brahmin and Harijan children significantly differed in the style of information processing *i.e.*, the Brahmin children were more analytic than the Harijan children. They had also more positive self-esteem compared to the Harijans and the discrepancy increased with increasing educational levels. Coming to intellectual performance, effects for caste was significant for digit forward and backward, reflective mode of responding, perseverative errors in concept learning nonperseverative errors in concept learning, word recognitions with reference to acoustically similar and Neutral words, performance in digit symbol test, memory for designs, verbal quantitative and total achievement scores on the basis of teacher made tests. In all these tests the nature of performance was superior in the high caste group, moderate in the middle caste and low in the Harijan group. Further, castes X educational level interactions were significant and ordinal in respect of response latency *i.e.*, with increase in educational level high and middle caste children became more reflective and low caste children became comparatively more impulsive. Deficit in concept aquisition with respect to form became more with increase in educational level. Perseverative errors were less with higher caste group compared to low caste. Recognition scores for orthographic words were progressively superior in high caste group children than low caste group. Memory for design, verbal and achievement scores supported the "Broomstick effect" in the low caste group.

In sum, many the results supported that with exception to basic intelligence where group difference did not occur between different castes, groups the low caste children did show deficits in personality, information processing modes, and intellectual achievement. And the deficits also indicated progressive or cumulative retardation in most of the measures. Hence, in our cultural background, memberships in low caste and low income family to predispose children to an impoverished environment and the consequences of this deprivation are cumulative over time.

Whiteman and Deutsch (1968) after reviewing the literature on social disadvantage, intellective, and language development opined that there is discontinuity between requirements and the child's prior preparation and experiences. The children from a disadvantaged environment misses some of experiences necessary for developing verbal, conceptual, attentional and learning skills requisite to school success. Because of this deficit there is progressive alienation from school environment and this alienation contributes to cumulative deficit of the disadvantaged child over time in their scholastic achievements.

Relationship between intelligence and low SES characteristics of deprivation has been very exhaustively dealt by Jensen (1970). Generally the magnitude of correlation has been as high as .50. In a Canadian sample Das (1973) investigated the relationship between IQ and SES by dividing the SES into seven hierarchial class intervals and after obtaining the mean IQ of the children in each of those class intervals. A striking linearity was observed. The IQ showed a significantly consistent increment from the lowest to the highest SES levels ranging from a mean of 90.33 in the highest to 78.66 in the lowest. The relationship between father's occupation mother's education, SES of parents with child's IQ were respectively .26, .29, .27 based on 1294 children. Deutsch and Brown (1964) reported data which support the following conclusions :

(*a*) Negro children at each SES level score lower than white children and (*b*) Negro-White IQ differences increase at each higher SES level—the Whites show more gain in IQ points at higher SES level than do the Negros. A similar finding has been reported by Jachuck and Mohanty (1974) and Das and Panda (1977) on Indian children of differing SES and intelligence.

Children from low SES and socially disadvantaged homes drop out from schools. Wastage and stagnation is a characteristic of the socially disadvantaged group. Drop out is solely due to cultural disadvantaged characteristic of low caste and rural background. The facts suggest that everything else remaining same the greater drop out rate is influenced by cultural disadvantage or deprivation. There are various causes of drop outs but membership in low

caste/low income group mostly makes one drop-out-prone in school. Similar trends are seen in all states in India.

NUTRITIONAL DEPRIVATION AND ACHIEVEMENT

We have been talking about cultural disadvantage and eductional under achievement. But poverty may affect intellectual development through physical conditions *i.e.*, malnourishment (Scrimshaw and Gordon 1968). Poverty is all pervasive in India and is responsible for social and educational pathology. There is a cultural of poverty characterised by the legacy of psychological distortion which mainfests itself in profound alienation from larger society and people, feeling in powerlessness and meaningless in struggles. When we live in a society of self advertisement and propagation, these people remain only conscious of their deprivation. Our middle class attitudes further brutalises the poor and the underprivileged. Psychological poverty, intellectual and effective poverty, nutritional and biochemical deficiency, institutional poverty all predispose a lower SES child more than any one else for educational under achievement.

Professor Birch and his associates (Birch and Belmont, 1964) have clearly demonstrated that malnourished children were not only of stunted growth and of short height but also were found to be below normal in reading ability and auditory visual integration. Birch suggests the malnutrition might have caused a structural deficit in the central nervous system which affects later intellectual achievement damanding complex integrative mechanism but there is no conclusive evidence of such a damage (Birch and Gussow, 1970). I can't agree more with the conceptualisation that was given by Das (1973) and Das and Private (1977) that poor children are unhappy, have no desire for self actualisation, they are apathetic distracted and have low n-ach. Because of the ill effects of poverty the poor becomes impoverished in educational achievement.

Nutritional deficiencies constitute most probably the greatest single deterrent to physical health had consequently to mental development and performance in school. Deprived children mostly suffer from malnourishment in one form or another. Current research on the possible connection between malnutrition in early life and mental development was reviewed at a symposium held in Saltsjobaden, Sweden in August 1973 by the Swedish Nutrition Foundation in conjunction with WHO and other bodies. The workshop felt that the complex relationship between nutrition, mental development and the importance of other concomitant or interfering phenomena such as social deprivation and repeated infections and expressed greater need for assessment of the problem and its effects on intellectual performance.

Two studies have been completed by the author and his colleagues on assessing the effect of malnourishment on intellectual performance (Dutta and Panda, 1977) and on ascertaining the concomitant effects physical anomalies and deficiencies on intellectual performance of low SES children (Spark and Panda, 1971). The former study is based on an Indian sample and the later on an American sample but both the studies included children from lower SES strata.

In the exploratory study Spark and Panda (1971) the purpose was to investigate the correlates of cognitive performance and achievement in reading, language arithmetic, and intelligence. The study included 538—296 boys and 242 girls, 239 black and 222 White children coming from Powhatan country rural lower SES homes and reading in 12 different grades. Measurement was done using WISC and California achievement tests alongwith detailed physical examination by medical staff.

Nearly 2/5th of rural disadvantaged children were under achievers in schools. Boys had more poor attendance in schools than girls. Boys had greater emotional problems, social problems, auditory and orthopaedic problems than girls. Negative relationships obtained between age and each of these measures : intelligence, verbal IQ, Non-Verbal IQ, and reading comprehension suggested the validity of cumulative deficit notion. IQ scores are lower than the age norm. Arithmetic and reading grades of these children are one to two grades below the grades in which they have been enrolled.

Within the class, mean intelligence score and achievement scores measured by California Achievement test were lower in Negro pupils than those in which pupils. Further, the discripancy was in the higher grades. This suggests a similar interpretation of performance different between Brahmin/ Harijan studies conducted in India and progressive retardation over age obtained in many studies.

Within the deprived community the girls appeared to be comparatively better than boys in intellectual performance. There is a curvilinear relationship between sex and arithmetic reasoning and airthmetic fundamentals across grade levels. But in reading comprehension and reading vocabulry than boys across all grade levels children girls did better having physical/orthopaedic problems did not show consistent poor performance in the cognitive tasks. The research findings permit us a general statement *i.e.*, all groups of disadvantaged rural students are characterised by poor cognitive competence, and educational achievement. We essentially came to the some conclusion whether we analysed the results in terms of organismic variables such as : sex, race, grade, levels or by dichotomising the Ss on the basis of some behavioural characteristics : social, emotional, physical. Differentiation on the basis of physical characteristics offered some meaningful about rural

disadvantaged children especially of their educational retardation. Obviously sensory impairments and general malnutritional factors do inhibit school learning.

Dutta and Panda (1977) have observed the consequence of malnutrition on intellectual performance of the low income group children. The study included 360 (180 tall, 180 short) children. The Sweden Conference made it clear that stunting of the child can be considered as an index of malnutrition. All these children came from two caste groups Brahmin (High) and Harijan (Low). The Harijan sample was drawn from both rural and urban schools but the Brahmin sample was only from rural schools. A large number of children were tested with regard to their heights and a distribution of heights was done. Those whose heights fall below Q, were included in the short category and all those whose heights were above Q3 were included in the tall category.

The unban Brahmin sample was not included in this study because of their consistent superior performance in the previous studies. Following Birch and Belmont (1964) children who are of short height were considered malnourished and the tall group acted as its control. Each of these children were given a series of cognitive tests including classroom learning tasks, social personal adjustment, self concept, and cognitive style tests. Parents were also interviewed on a parental expectancy questionnaire. The analysis of the data revealed the following results scores on parental expectancy of education of their children, keeping knowledge of children's progress, and making preparation for their educational attainment are consistently lower for all the four Harijan groups and short Brahmin children compared to tall Brahmin children. The scores in case of the short Brahmin children is also higher than those of Harijan groups. On parental interest about children's academic achievement however, the scores of all groups were fairly close except that of tall Brahmin group.

In school achievement, Brahmin children were better of than Harijan children. Tall Harijan children were superior to short stature Harijan children mostly in rural areas. On tests or cross modal coding and short term memory (visual) the effects of malnourishment was clear cut. Short stature children of low/high caste did poor compared to all groups of the respective categories. Brahmin children scored high compared to Harijan children. The colour naming and word reading speed did not reveal significant differences between short and tall groups but superiority of the high caste over the low caste was pronounced. Consistent with previous findings short stature children had lower intelligence as measure by Raven's Coloured Progressive Matrics than the children, and superiority of Brahmin children over Harijans (both urban/rural) got confirmed the data. Malnourished children identified

by short stature were inferior in discrimination learning measured by matching of familiar figures and had poor self-concept scores compared to the tall groups. Caste differences were not obvious in these areas, although the Brahmin children had more number of associations to functional words than that of the Harijan children. These results although preliminary at present do indicate the differential effects of malnourishment on cognitive performance of children and parental expectations. Malnourishment affects adversely the intellectual and affective performance of children. Birth in a high caste compensates to some extent the ill effects of malnourishment.

DEPRIVATION, DISCRIMINATION AND ACHIEVEMENT

There is an implicit theory behind cultural difference or deprivation. Deprived children differ from normal in that they are poor, less skilled and lack adequate educational opportunities. Coleman's report (1966) was unable to show that difference in educational opportunities caused low achievement of the deprived, the best could be said that the ghetoo schools did nothing to help blacks to catch up the whites.

The emphasis on inadequate home preparation for schools and the emphasis on social service, suggest a culture poverty theory, that poor and low caste people have a special culture a set of rules for living, customs, values, which prevent achievement and in their adaptations to the different social constraints placed upon them (Robinson, 1976).

Discrimination, social stigma, or institutional racism or casteism account completely for the amount of persistence of poverty of intellect, affective relationship or economic handicaps or in a word deprivation. Experimental validation of the effects of built-in-expectancy on the life of the stigmatised has been shown repeatedly following Rosenthal and Jocobson's (1968) "Pygmalion in the classroom".

Even simulated expectancy regarding membership in a low caste or deprived group has also brought significant changes in teacher behaviour towards the pupils both during teaching (Panda and Guskin, 1976) and evaluation (Panda and Dash, 1980). Discrimination does exist and it does impair intellectual performance of the deprived (Paul Freire, 1972).

The styles of behaviour which are statistically more common among the deprived and which serve to prevent assimilation are escapism, alienation, apathy, and timidity, and low learning ability. These are culturally determined characteristics and adaptive responses to a given social situation and not tendencies inherent in the individual. Low SES becomes the explanation for everything and sometimes in a completely circular fashion, for poverty itself.

Crain and Weisman (1972) comparing the performance of Southern and

Northern Negroes stated that Southern Negroes are brought up under the oppressive sanction of the southern society and therefore, are more inhibited, and live with a low internal control and ahievement. The same Negroes brought up Northern climate show higher achievement in integrated schools.

The question, therefore arises should the culturally different or the deprived be brought into an integrated classroom. The U.S. Supreme Courts' famous 1954 opinion was, "Segregation of White and coloured children in public schools has a detrimental effect upon the coloured children. The impact is greater when it has the sanction of law, for the policy of separating the races is usually interpreted as denoting the inferiority of the Negro group. A sense of inferiority affects the motivation of a child to learn. Segregation with the sanction of low, therefore, has a tendency to retard the educational and mental development of Negro children and to deprive them of some of the benefits they would receive in a racially integrated school system...". This fact has been amply support by modern authority.

Many of the deficits observed in the socially disadvantaged are more motivational rather than intellectual and cognitive. The underprivileged children display some significant motivational problems which determine a major aspect of their behaviour patterns.

(*a*) They show belief in external factors *i.e.*, luck, chance, fate etc. rather than their own self and activity. This inability to attribute causality to one's own behaviour accounts for poor motivation in any task.

(*b*) They can not delay gratification. Immediate tangible and non-contingent rewards are their need.

(*c*) They have high sense of avoiding failure than striving for success.

(*d*) They have poor self-concept, low achievement aspiration, and need achievement including lack of desire for self actualisation.

(*e*) Their general behaviour lacks intrinsic motivation instead of its is governed by insecurity and anxiety which are negative motivational factors.

These are explained in terms of learning and motivational deficits, feeling of alienation combined with apathy unresponsiveness and lack of initiative.

INTEGRATION, INTERVENTION AND ACHIEVEMENT

Can children come back after a poor start ?

Do these studies orient us then to think less hopefully about the fate of the deprived group ? This question was asked by Prof. Sinha (1976) after examining a whole series of work on deprived. He believed that an early

enrichment programme at the preschool and kindergarten levels may be helpful in arresting or reversing the cumulative deficit. For the Indian disadvantaged tribal children Rath (1974) recommended interventions in form of compensatory and high intensity education as remedial measures. The writer (Panda, 1976) has also suggested the special requirements of an instructional pattern that will be suitable for the disadvantaged children. The suggestion included modification in teacher training curriculum, changing the life style characteristics of the deprived, use of accelerated learning programmes and changing the motivational and affective climate of the classroom (Panda and Lynch, 1972). The scope here is not to go in depth to the various intervention programmes but just to point out what approach we might consider while planning for an intervention programme for the children and for the institution.

Perhaps the answer may be sought in training the deprived children for realistic goal setting, developing self attribution, developing a more analytic way of information processing while in school and giving training for intellectual activities and/or skills where they are dificient. But it is essential that parental education is more crucial in so far as providing an enriched environment in early childhood is concerned.

A brief review of such approach is considered necessary at this point. The Coleman data has proved that integration resulted in improvements in the achievement test scores of black students, *i.e.*, Black students in integrated schools do better than those in Middle class all Black schools. Coleman suggests that the overall gain in verbal ability for Blacks in an integrated school is approximately 1/4 of a SD. Crain and Weisman (1972) observed the problem of achievement in relation to integration. They defined *integration (a) the Negro student attended in school with White for atleast* 5 years, (*b*) no White student did move out of the school, (*c*) the school was atleast half White.

It was found that nearly 1/2 of the segregated pupils did not finish high school (48%) compared to 36% students of the integrated schools. That is drop out rate is reduced by 1/4 in integrated schools. Further, integration seems to cut the drop out rate for Southern migrants nearly in half.

More specifically, the findings were :

1. Pupils of integrated schools are more likely to finish elementary and high school and to attend and finish college.
2. Students who attended integrated high schools and segregated elementary schools fare as well in terms of finishing high school as those whose schooling was entirely integrate.
3. The effects of integration are stronger for both men and women students.

4. Students who attend integrated schools scored higher on the verbal achievement test than those who attended segregated schools.
5. Occupying a deprived status or a minority status in an integrated school failed to show social and psychological strain among the pupils.

Optimism concerning the effectiveness of preschool compensatory program such as project Head Start has waived considerably in the last few years. Findings have been consistent that at the end of a year of Head Start type of experience children as superior to children without pre-school experience in both intellectual and social-emotional functioning (Klaus and Gray, 1968), Weikart, 1971). However, the superiority of Head Start children vanishes or is greatly diminished by the end of one year of formal school (Bronfenbrener, 1974). In the fact of this evidence some have concluded that compensatory education or Head Start in particular, is a failure (Eysenk, 1971 : Jensen 1969). It is unrealistic to expect long term effect of a short term intervention. But it can't be denied that the programs have in fact been successful partially in removing educational disadvantage which economically disadvantaged children might encounter in later life (Bereiter and Engleman, 1966). For this reason the Follow Through Project has been introduced which is 4 year compensatory education programme in U.S.A. school system. Longitudinal data analysis (Abelson and Zigler, 1974) revealed that the followup through programme was not capable of ameliorating all of the negative effects of living in an economically disadvantaged group, however, the programme was highly beneficial to the children who participated in it. The longitudinal and cross-sectional evidence together point to the conclusion that the gains accurring from compensatory education programmes are commensurate with the duration and amount of effort which are expanded on these programmes. Abelson and Zigler (1974) are thus very clear in the their statement concerning the efficacy of enrichment programmes. Developmental psychologists agree on two basic assumptions : Environmental factors help determine how fast or slowly children develop intellectual ability, and second experinces during the first years of life strongly shape *children's relative intellectual functioning. Harvard University psychologist* Prof. Kagan asks a fundamental question. Are the ill effects of early deprivation irreversible ? Or does delayed growth persist in children ? "Only if the environment that causes the delay remains the same", replies Kagan to his colleagues.

A detailed outline of compensatory education is given in earlier chapter of this book.

Every one is of the assumption that group differences in intellectual activities, affective characteristics, parental expectancies associated with the

terms "Cultural deprivation"or "Cultural differences" are an alibi for educational neglect or invironmental ensufficiency and in no way a reflection of the nature of the educational process, which starts quite early in life in family and later on in school. In a country with wide spread poverty, affective impoverishment, ignorance of an effective child-rearing process it is imperative that the most socially relevant topic for research would be understanding the process through which deprivation or a differences affects adversely the scholastic performance of children belonging to various strata. An outline for a process model approach to research has been suggested by the present author (Panda, 1974). Deprivation is a condition, it manifests in behavioural characteristics through some processes of interaction. If processes characterising the transmission of deficits could be identified then intervention strategies can be well planned. The present review of the work done mostly in our social context, is quite suggestive in this direction. Remedial effects may be best attained by programme that direct attention to a number specific areas and competencies rather than concentrating effort upon one.

REMEDIAL MEASURES

Certain remedial measures have been recommended. It is true that deprivation does exist among the socially disadvantaged children due to predominantly.

(*a*) Inadequate early socialisation
(*b*) Mark of oppression
(*c*) Organic deficits
(*d*) Inadequate social environment
(*e*) Culture conflicts and educational deprivation.

In order to reverse the ill effects research studies support certain measures.

(*a*) Early modeling and imitation of desirabe behaviour.
(*b*) Language enrichment programme and stimulation at home.
(*c*) Affective attention and acceptance.
(*d*) Providing initial success experience to build better motivation and striving for success.
(*e*) Removal of discrimination attitudes on the part of teachers and other significant members of society.
(*f*) Humanistic apporach to teaching the underprivileged in school.
(*g*) Instructional programmes may be greaded to their needs and ability level.
(*h*) Giving responsibility, recognition, tangible rewards, positive remarks etc.
(*i*) Exposure to sensitivity training, exposure to literature, discussion and group contacts, role playing, case conferences relating to their problems.

(*f*) Presenting learning materials using images, aids, and providing adequate organisers and drill.

Compensatory education programme have proved the validity of these recommendations.

EDUCATIONAL STRATEGIES FOR THE UNDERPRIVILEGED : THE ROLE OF TEACHERS

The following instructional strategies for educating the underprivileged are suggested considering the objectives of instructions and their entering behaviour to an instructional situation. Basically there is no difference in the way in which the underprivileged children learn. Their learning processes are subject to the same general principles of learning as are the learning processes of the average or normal but with a difference, the rate, the sequence, the type of materials and presentation modes. Hence, the need of a few guidelines is obvious.

(*a*) A continuous appraised of progress and comprehensive measure of assessment-diagnosis via feedback should become a part of every teaching act and basis of planning the next learning experience.

(*b*) If instructions is to be effective these students are to be simultaneously trained to achievement the three abjectives : knowledge, skills and attitudes.

(*c*) Since the students come to the school with cognitive deficit a special hour may be kept aside for remedial teaching langauge, training in how to increase some of their non-intellective characteristics *i.e.*, self-concept, level of aspiration, n-ach, sense for responsibility etc.

(*d*) Learning of concepts and ideas may be sequenced before they are presented to the underprivileged group, using more of concrete and life like situations. Training for analytic thinking may also constitute a part of the instructional programme design.

(*e*) The imposition of standardised expectation regarding performance should be replaced by more of individualisation in the rate of learning, exposure to varied materials. Instructions must be given how to pace performance according to their ability. The teacher has to ascertain the pre-requisites before instructing them to move to next step, and make provision for acting initial success experiences by the group.

(*f*) For educating the underprivileged giving recognition, responsibility, tangible rewards, positive affective remarks encouragement have been found to be effective and are to be encouraged in schools. Affective interactions and developments to be supported in a school programme.

(*g*) They also need to be acculturated through sensitivity training, exposure to literature, discussions and group contacts, role playing and case conferences.
(*h*) Self-instructional materials may be used best to their advantage.
(*i*) The curriculum should have direct bearing on their life and work especially for tribal population.

These are a but few directions which need be examined carefully through studies and be built into the educational strategy for the education of the underprivileged, so that they did not become victims of cumulative deprivation or the 'Broomstic effect'.

What is needed now is that our schools and educational systems must develop a better understanding of the implications of the social and psychological dynamics of deprivation and translate this understanding into educational programmes, into the training of teachers and administrations and into planning of curriculum and instruction. No single device will suffice to counteract or to remedy the complex factors those are associated with the education of the underprivileged. Administratively the problem can also be taken care of by dealing with acculturation problems and school learning by providing early school experience to these children and following an ungraded sequences or multiple entry system. To unlook the hidden potential among these children, a radical change in curriculum and teaching is required. Atleast the new curriculum which has been introduced is constructed in such a way that it is related to the psychological realities of the child, is tuned to our social and community life, is geared towards achieving needs and aspirations of our people and the educational climate that is promulgated in the frame-work is more motivating in terms of teaching techniques for which orientation of teachers are conducted in a massive way by the NCERT, SIE and State Deptt. of Education. In a nutshell it is possible to conceive of education as a countervailing force to overcome the deficits accumulated in underprivileged groups or what is currently understood as the broomstick effect. It is true that it is not the educators function only to reverse the negative impacts of educational deprivation, social and effective insultation, caste discrimination and economic deprivation. It involves all aspects of the community. The task surely calls for creative innovation all along the line. The crucial pedagogical problem involved is that of understanding the mechanism of learning facility and learning dysfunction and applying this knowledge to optimum development of a heterogeneous population characterised by differential backgrounds, opportunities and patterns of social and intellectual funciton.

Then what do the psychological studies on deprivation tell us and what course of action is suggestive from these generalisations ? Deprivation does

exist among a larger section of student community whether we call it as due to inadequacy of early socialisation, organic deficits, mark of oppression; inadequate social reinforcement, culture confilicts and educational deprivation. The various studies that emphasis population characteristics underlining deprivation at the same time agree on the complex interplay of various intervening processes (Panda, 1974) in causing the performance deficit of the underprivileged children.

A large body of literature deals with trainability of intellectual function and reversibility of early deprivation which was in fact, the concern of Binet and Montessori since a long time. There is little research to support that intellectual functions continues to be malleable into adult periods of life and compensatory programmes are myth. While this may be true largely, it is possible to accelerate the educational achievement of the underprivileged if we attack the issue from a more affective and interpersonal relationship angle. In fact, all learning occur in a emotional climate and this is more so far the deprived of underprivileged. Zigler attempts to account for the changes in the affective state (motivation, task involvements etc.) Affective processes are more manipulable than cognitive processes and as such use of social reinforcement giving attention and approval, building positive expectancies through initial success, elaborative comments and praise, non-verbal attention through a smile, do in fact improve cognitive performance (Zigler, 1966; Panda 1971, Panda and Lynch, 1972, Panda, 1974).

An area of research in which data are available is the desegregation of underprivileged children into a separate school system, special schools and rural schools. Consistently poor children attending school in poor neighbourhood tend to display poor achievement. Achievement levels raise with desegregation and it also brings about overall increase in quality of education throughout the system. Of course in our society segregated classrooms are not available for the underprivileged but there are schools in rural areas which represents the ecology of a special school. Ashram schools and schools where minority group children are few in a regular school. In such schools, the teachers do hold stigmas and try to have their self-fulfilling prophecies achieved (Rosenthal & Jocobson, 1969), (Panda & Guskin, 1976). The belief that "he comes from SC/ST, or his parents are labourers and that he cannot learn", this attitude of teachers is detrimental to the educational growth of underprivileged. Hence, each teacher must deal with all student population in equal manner and try to foster their curiosity, creativity and make them all active participators in the teaching-learning process. Teacher's behaviour that is warm, permissive and encouraging can attract underprivileged to the school. The whole educational process has to be humanised and building up of interpersonal relationship can effectively

contribute to academic exchange and improvement. Teachers can make a difference in the life of the pupils and more so in the life of the underprivileged. We have to engineer what this difference ought to be in our policy, planning and implementation of an educational programme.

For the most part, education of the underprivileged children can be speeded up by disseminating appropriate method of child rearing systems and values among the parents much before the child comes to school. This will difinitely reduce the dicontinuities in the norms of children and norms of school. In constrast to the varied, detailed and sometimes adequately designed studies and their reports, it is strange that we psychologists in this country do not take these generalisations to the reach of the common man who contribute to a great majority of the underprivileged children in school.

An improtant measure is to make education acceptable to the Scheduled Castes and Scheduled Tribes which constitute a major block of the underprivileged group and make education relevant to them.

GUIDANCE IN THE SERVICE OF THE UNDERPRIVILEGED

Education students for the changes which will effect their lives is a relavant concern for all educators. In the case of underprivileged children, the challenge is even greater. The likelihood that these children will overcome the handicaps of poverty in rural and as well as slum areas seems to be related as to how effectively the school personnel assist them. In fact, individuality can be fostered and realised through effecive guidance service and the establishment and development of these services can be enhanced by an appreciation of the ecology of the individual and ecology of the school.

The rural disadvantaged children live in an isolated and less densely populated areas. These conditions limit their opportunities for adequate health, social and recreational activities, relevant euducational experiences and exposure to vocational life styles which could be a means for changing their future. The characteristics of the rural community further inhibit the learning of new behaviours for coping with urban living. It is the special task of the counsellors and teachers to enable students to discover how they can exercise more control over their life choices. Hence, in each school and for a school complex institution of student personnel services is a must. In small schools, part-time counsellors may be the only source of specialised student personnel services. In general, hopelessness and powerlessness or anomie are so strong among teachers/counsellors that they should change much more than the students in order to make this possible. One of the most significant contributions that a counsellor can make to any student's identity introducing a belief in himself as the most significant determinant of his own destiny, which I have referred as intellectual achievement responsibility

(IAR) earlier. In fact, there is much that rural disadvantaged children can learn and do about themselves and their environment, but the counsellor shall work with and through other persons significant, in the lives of these students and help them to develop and realistic self concept.

Considering from all points of view, guidance activities for the disadvantaged may be organised in small groups of eight to twelve. The information giving, task orientation and counselling type of activities will be more effective in small groups for the disadvantaged because they will not be inhibited before an adult authority as is true of any individual counselling situation. Role playing as a technique is most suitable for guiding the activities of the disadvantaged. Further, for helping the rural disadvantaged, guidance service, programme needs be extended through parental counselling, community resources clubs, and referral to a psychologist who should be available at least in each school complex. Guidance must from a part of the entire educational programme which students should perceive as personality relevant for them.

It has been rightly stated by Schrieber (1965) *c.f.*, Swenney (1971), p. 58.

"If the child is the father to the man then we know that unless drastic changes take place in rural education the new adult generation persently in school, will have lower levels of scholastic attainment and be less able to find employment than youth reared in urban centres. Hence, the real challenge rural youth offers to rural educators is to prepare them and by preparing them, to ensure them a viable and productive life commensurate with their potential abilities".

As has been pointed out earlier that rural disadvantaged children live in a different ecology than those in urban slums and the objectives which these students set are also different those of their rural peers. Hence, the following guidance strategies for urban disadvantaged children are recommended by Menacker (1971).

1. Intervening to assist in manipulation of the students and environment.
2. Helping the student to cope with the school programme through behavioural alterations.

A major defect for the success of guidance programme in slum areas or urban schools is that it has not been successful in marshalling parental support for the school programme and generally has failed even to establish an adequate system of meaningful communication between the school and parents. For helping disadvantaged the guidance specialist should not wait for a referral but should be involved in the confrontation and dialogues

between the community and the school in order to help channel these relationships to bring effective and harmonious school community relations.

REVIEW EXERCISES

Answer the following questions within 500 words each :

1. Who is underprivileged child ? How would you define such children ?
2. What are the characteristics of under privileged children ?
3. How would you motivate underprivileged children to learn ?
4. What are the educational strategies for helping underprivileged ?
5. What is compensatory education ? What are its results ?
6. What is the relationships between malnutrition and scholastic achievement ?
7. How would discrimination affect the underprivileged children ?
8. How best underprivileged children can be integrated to the mainstream ?
9. How can guidance be used to help the disadvantaged ?

Write the meaning of the following terms in 50 words each :

1. Underprivileged
2. Cultural Deprivation
3. Cummulative deficits
4. Drop out
5. Stagnation
6. Remedial education
7. Compensatory education
8. Guidance service
9. Preschool environment
10. Discrimination or stigma.

Write whether the statements are True or False :

1. Underprivileged children are characterised by progressive decline in intellectual functioning.
2. Underprivileged children continue to remain in school once they are enrolled.
3. Cumulative deficit in performance is the curricular fault not that of under privileged children.
4. Underprivileged children stress immediate reward.
5. Underprivileged children are the result of heredity.

Fill in the blanks :

1. There is a culture of poverty for the.....
2. Underprivileged children are..... anxious than normal children.
3. .....makes underprivileged children more inferior.
4. Belief in.....is the characteristic motivation of underprivileged children.
5. Underprivileged children cannot come back after a.....start.

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Learning Disabled Children

The enigma of the youngster who has difficulty in learning is not new. But the concept of learning disability has a brief and turbulent history both conceptually and operationally. Some children are quite normal and at times display learning problems. They write *deb* for *bed, was* for *saw* and cannot concentrate against any background noise. The National Advisory Committee on handicapped children (USA) defined learning disability as follows (1968).

LD children exhibit *disorder in one or more basic psychological processes* involved in understanding and in using in spoken or written languages. These disorders are manifested in listening, thinking, talking, reading, writing, spelling, and arithmetic. They include conditions which are referred to as perceptual problems, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia etc. They do not include learning problems which are primarily due to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage.

Learning disability is an interdisciplinary field and the above definition of learning disabled children is acceptable to all concerned professional groups (Kass and Myklebust, 1969).

A more conservative estimate has been made by the National Advisory Committee on Handicapped Children and they report that 1 to 3 per cent of the school population are learning disabled.

Originally children whose achievement was far below their capability were categorised under brain injured children (Strauss and Lehtinnen, 1947), neurophrenia (Doll, 1960), Strauss Syndrome (Stevens and Birch 1957), minimal brain dysfunction (Clements, 1966). It is for the first time that Kirk (1963) suggested the word learning disabilities to describe all the child's behavioural symptoms that arise from dysfunction of the central processing mechanisms. This term describes a group of children who had disorders in the development of language, speech, reading and associated

communication skills needed for social interaction. Children with sensory and/emotional handicap are excluded from this category.

IDENTIFICATION OF LEARNING DISABLED CHILDREN

There are certain behavioural indeces which indicate the presence of learning disabilities in children. These are so called *identification* marks.

1. Near average, average or above average in intellectual ability
2. Impulsive behaviour in talk and action
3. Inability to focus on one activity
4. Easily distractible
5. Inability to shift from one activity to another
6. Easy onset of fatigue
7. Wrong or inappropriate perception
8. Reversal in writing and reading and transposition
9. Problems of left and right, up and down orientation
10. Difficulty in understanding and remembering oral message
11. Difficulty in interpretation and remembering visual image
12. Language and organisation difficulties
13. Trial and error approach to work
14. Thinking problem relating to abstract ideas and concepts
15. Poor fine motor coordination
16. Clumsiness in thinking
17. Hyperactivity (easily stimulated)
18. Hypoactivity (late action with much stimulation)

Early identification of such difficulties are important even from pre-school period so that remedial education can be provided. In fact the sonner the high risk children are recognised the greater is the chance or preventing failure.

Assessment of pre-school level children can be made as per DIAL model (Developmental Indicators for the Assessment of Learning)— Mardell and Goldenberg (1975). It is meant for 2½ to 5½ year old in the areas of sensory, motor, affective, social, conceptual, language communication in less than 30 minutes. The tests consists of visual and auditory activity, gross motor movements, fine motor movements, finger agility, anxiety, task attention, focus and persistence, social skills, identifying objects, colours, sorting, receiving and expressing language, articulation etc.

Besides the DIAL, there are PPVT, Bohem Test of Basic Concepts, Early Detection Inventory. The facts remain that children face school failure because their learning difficulties are not detected at preschool age or if at all detected not treated well no time.

At the elementary and secondary level identifications of learning

disabilities become relatively easier because availability of instruments, teacher observations and achievement index. Each learning disabled child undergoes neurological examinations, Reading tests, Visual-motor Gestalt tests requiring them to copy various geometric forms, awareness of one's body parts (Draw a man test). Gross-motor tests, Fine-motor test, hyper kinesis, reading problems, autological findings (hearing sounds) and biochemical screening. These medical characteristics are necessary to deal with learning disabled children besides intellectual and achievement scores.

This stage of the school evaluation would consist of

(*a*) Developmental disabilities.
(*b*) Discrepancy between ability and achievement.
(*c*) Process of child's learning.
(*d*) Analyse why he does not learn by case history, informal test, observation, standardised test.
(*e*) Psychological test findings.
(*f*) Case history relating to health, development, present activities, identifying information, Birth history, Physical and developmental data, social and emotional factors educational factors adjustment.
(*g*) Teacher's rating on auditory comprehension, spoken language, orientation, behaviour, motor.
(*h*) Spelling errors, informal arithmetic tests, reading tests, graded word recognition test.
(*i*) Tests of mental abilities and mental processes.

BEHAVIOURAL TESTS USED TO IDENTIFY LEARNING DISABILITY

(*a*) Infromal Reading Inventory — Johnson and Kress (1965). It measures quickly reading skills, reading levels, types of errors, unknown words, related behavioural characteristics.
(*b*) Informal Graded Word — Recongnition Test-Durrell (1956). It measures quickly reading level and errors.
(*c*) Informal Arithmetic Test — Otto, McMennemy and Smith (1973).
(*d*) Wechsler — Intelligence Scale for Children (Revised) 1974.
(*e*) Stanford — Binet Intelligence Scale.
(*f*) Peabody Picture Vocabulary Test.
(*g*) Illinois test of Psychologistic Abilities (Kirk, McCarthy and Kirk, 1968).
(*h*) Lincoln Oseretsky Motor Development Scale.
(*i*) Vineland Social Maturity Scale.

Causes

1. **Organically Based Causes**. LD arises because of Minimal Brain Dysfunction (MBD). They dysfunction occurs in central nervous system

which consists of brain and the spinal cord. The malfunctioning is not due to damage, but due to dysfunction which is only minimal. Minimal brain dysfunction arises due to (*a*) cerebral hemorrhage, cerebral disease because of high fever, head injury, (*b*) intrauterine environment-premature birth, anoxia, physical trauma, (*c*) constitutional-genetic-neurochemical dysfunction. It must be noted that all brain dysfunctions are not associated with learning disability and all types of learning disability do not arise due to brain dysfunction.

2. **Environmentally Based Causes**. Learning disability may be caused due to insufficient early experience, and emotional disturbance.

CHARACTERISTICS OF LD CHILDREN

Motor Activity

Hyperactivity	—	constantly engaged in movement, unable to sit still, too much of talking in the class, very much inattentive.
Hypoactivity	—	(reverse of hyperactivity) — lethargic, quite, passive.
Incoordination	—	physical awkwardness, poor motor integration, poor activities in running, catching, skipping, and jumping; walking is rigid and stiff; poor performance in writing, drawing; frequent falls, stubbling, and clumsy behaviour.
Perseveration	—	involuntary continuation of behaviour; this behaviour is witnessed in speaking, writing, drawing, pointing, and oral reading; incorrect spelling, repetition of errors.

EMOTIONAL DISORDERS

1. They are quiet and obedient, but daydream and cannot read.
2. They have frequent temper outbursts, sometimes for no apparent reason.
3. They are nervous; attention is difficult to hold.
4. They jump from one thing to another, and mind everyone's business but their own.
5. They talk self control but cannot work with other children. Teach them constantly.
6. They are emotionally labile and unstable.

Emotional instability arises mainly due to prolonged dependency on the mother and lack of contact with the outside world which generates frustrations.

PERCEPTUAL DISORDERS

1. They are unable to identify, discriminate and interpret sensation.
2. They have poor visual decoding (unable to reproduce geometric forms accurately, figure — ground configurations, letter reversals and rotations).
3. They have poor auditory decoding (inability to recognise tunes, to differentiate between sounds).
4. They cannot identify familiar objects by touch alone (cutaneous misperception).
5. They have poor kinesthetic and vestibular perception (problems in coordination, movement, directionality, space orientation, and balance, difficulties in perception lead to difficulties in concept formation, abstraction ability, cognitive ability, and language ability).

SYMBOLIC DISORDERS

1. They have poor receptive-auditory ability (poor understanding of spoken symbols, requests for repetition, echolaliac, confection of directions and commands).
2. They exhibit receptive-visual difficulty (subvocalise reading, read without understanding).
3. They have poor expressive-vocal ability (disorganised thought, inadequate syntax, and dearth ideas for expression).
4. They manifest expressive-motor difficulties (spelling disorders, drawing disorders, omission and reversal of letters, omission of whole words).

ATTENTION DISORDERS

1. They cannot sustain attention for the required amount of time.
2. They are unable to attend to the relevant and ignore the irrelevant. They may be attracted to every stimulus that surrounds him.
3. They can be diverted easily from one topic to another.
4. They put excessive attention to unimportant details while disregarding the essentials (attends to the page number than to the printed matter or the picture on the page).

MEMORY DISORDERS

1. Disorders of memory involve difficulty in the assimilation, storage, and retrieval of information, and may be associated with visual, auditory, or other learning processes.
2. The LD children have difficulties in reproducing rhythm patterns, sequence of digits, words, or phrases.
3. They have difficulty in revisualising letters, words or forms.

4. Both the short-term and the long-term memory of the LD child are poor.
5. They fail to see the relationship between his present and past experiences.

EDUCATION OF LEARNING DISABLED

The role of Teachers

The following instructional techniques have been used and recommended for use with LD children :

1. Use short, brief directions, large print
2. Use consistent language, colour cues
3. Write directions or steps on the chalkbord *i.e.*, underline important words etc.
4. Alternate the use of colours for each step in a series of directions.
5. Increase sound level of instruction
6. Use diagrams or pictorial illustrations
7. Use an overview of the lesson, ask questions, ask them to read the material, recite and review.

Since LD children lack structure and organisation, they have to be told to, keep a list of daily engagement on activities; list all future events that need to be scheduled. Provide a hypothetical list to suggest possible events; and plan future events that must be planned, it is time to develop a weekly schedule. Pupils in the upper grades may find useful a schedule that provides for specific subject matter assignments and various types of activities.

Thinking skills can be developed by guiding students collect data by reading, listening, and observing; and discriminate differences and similarities in the data. Teacher questioning can be used to prod the pupil until the ability to make these discriminations improves. Ask the pupil to categorise and classify the data. Labelling is important during this stage.

Have the pupil recategorise and classify the data in other ways. This continuous reorganisation and restructuring is necessary to integrate new information and new experiences into the pupil's mental structures. Have the pupil make predictions based on the data. Have the pupil generate alternative predictions using the same data. Have the pupil evaluate the alternative predictions by comparing and constrasting possible outcomes and their effects.

Memory ability can be improved by using certain specific techniques, visual and auditory messages can be recalled. Facial expressions indicative of certain materials can be retrieved. Cramming is to be avoided. Certain activities can be practised to improve auditory, visual momories.

1. Have pupils repeat telephone numbers and street addresses of emergency service facilities (police, fire, etc.)
2. Have pupils learn songs by listening to the words and tunes.
3. Play games in which the first pupil makes a statement, the next pupil repeats that and adds a statement, the third pupil repeats those statements and adds one, and so on.
4. Have pupils make up rhymes related to subject matter, such as, "In 1492 Columbus sailed the ocean blue".
5. Have pupils repeat oral directions.
6. Have pupils resequence cartoon strips (without words) that have been cut apart. This forces them to observe details in the pictures.
7. Have pupils describe configurations of words that are similar. By comparing *then* with *them*, pupils would be forced to discriminate that *them* is slightly longer than *then* becuase it has one more hump.
8. Have pupils repeat the sequence for a recipe that they have read.
9. Use teachistoscopic devices.
10. Have the pupil practice attending to larger units at one time. For instance, some try to copy one syllable at a time. Encourage the pupil to increase the length of the visual stimulus that she holds in her mind as she writes it down.
11. Help the pupil to practice internal auditorisation as an adjunct to visual memory; that is, have the pupil say the letters or words to herself while she is translating the written information.
12. Write every other item on the chalkboard with a different colour chalk. This helps the pupil to "find per place".
13. Allow the pupil to copy another pupil's work. Some of these pupils perform better with paper-to-paper copying than with chalkboard-to-paper copying.

Teachers must be flexible in their approach to teaching reading because of the heterogenous characteristics of learning disabled pupils, a diagnositc-prescriptive approach must be used. The reading programme must be matched to pupil's needs and abilities. There are several approaches having different degree of relevance.

The Basal reading approach is comprehensive, which uses controlled vocabulary in a sequential manner with adequate reinforcement. Diagnosis is done in course of teaching but it is not so advantageous for LD children because of its rigidity, individualised nature and lack of provision for removing deficits.

Phonic approach has very limited use especially only for those who had good auditory capacity. Linguisitc training also has limited use as it does not aid comprehension.

Language experience approach is most useful as it uses stories, personal experiences, child's oral language, incorporates specific skill development, language art skills and makes use of visual motor abilities. Programme instruction is also another viable technique. The other approaches to reading uses multisensory approach and use of pictures. Both the method have limitations. Because of complexities of both the reading process and learning disabilities, it is difficult to make definitive statements.

Ashlock (1972), Bley and Thoriton (1981) and Reisinau (1972), made certain specific remedial instruction step for removing arithmetic errors of learning disabled children. Some of the steps are as follows :

Use manipulatives such as buttons and chips to teach number. Use visual material and give reinforcement. Use graph paper for alignment difficulties. Time line, coloured chalks, making pens are helpful for attention to cues. A sample problem can be given for each assignment. The size of numbers can vary to indicate *more* or *less*. Reduce distractions as far as possible. Reduce number of examples in the assignment and eliminate copying. Use of display charts, abacus, playing cards, calculator, language master are quite useful.

Spelling errors are quite common among learning disabled children Therefore a systematic word-study technique is used in the following sequence.

"Look at the word — say the word —cover the word — say the word — look at the word — cover the word — write the word — check your spelling — Repeat". Some of the remedial techniques involve — writing the word on the Chalk and then trace it in fingers until it disappears tracing in sand, write the first letter of the word when one listens the word and then pronounce. Ask the children to spell the word properly and clap softly for each vowel sound, if possible by looking at the word.

INTEGRATED EDUCATION

Learning disabled children read in the regular class as other children. Hence, certain extra care would benefit these pupils. These concerns may relate to four areas; such as

Auditory Perception

1. Identify classmates from voice when one is blind
2. Produce a speech sound and ask if they listen
3. Ask whether pairs of words are same or different
4. Start naming objects that starts with a particular sound
5. Practice rhymes
6. Ask them to repeat oral directions
7. Tell a sequence of information to improve auditory memory

Visual Perception

1. Match a geometric design
2. Ask them to replicate a pattern
3. Ask them to classify objects
4. Match, sort and group word cards
5. Start copying designs from simple to complex
6. Tell a story with pictures. Then scramble the pictures and ask pupils to tell the story
7. Recall letters speedily and find a series of letters in words.

Sensory Motor Development

1. Manipulation of objects according to directions *i.e.*, in front of, in the middle etc.
2. Use puzzles
3. Reproduce block designs
4. Pour water in different containers
5. Design games
6. Use tracing, lacing and cutting activities and visual tracking activities.

Social Skills

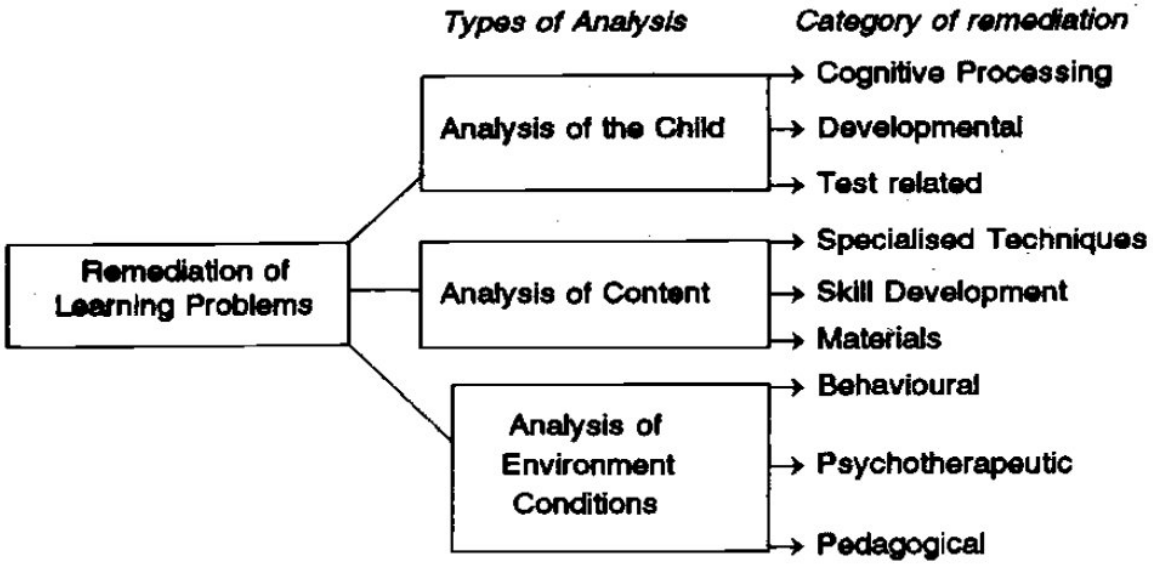
1. Discuss different emotions through pictures
2. Explain body language
3. Use T.V. for explaining, social encounters and social interactions.
4. Identify topics for discussion with peers, neighbours
5. Remember Key points of conversation
6. Discuss personal experiences that have caused social difficulties.

Mildly and moderately learning disabled pupils can function satisfactorily in the regular classroom with these adjustments. The regular classroom curriculum may require little modification. These are some of the general techniques of remediation but a specific theoretical model should guide the practitioner.

The cognitive processing approach provides a way of thinking about how a child learns and offers a framework for teaching. The developmental approach emphasises sequential approach for remediation. Test related approach identifies specific area of deficiency which can be taught.

The specialised techniques approach indicate that the teacher would follow the prescribed order and fashion for a specified period of time. Hierarchy of skills are to be developed in the Skill-Developmental approach using criterion referenced teaching. Published materials can be used for remediation of learning disability.

Behavioural approach refers to behaviour modification approach for manipulations of environmental conditions of learning. Apply reinforcement and change behaviour. Psychotherapeutic approach should build feelings of



success and establish a healthy psychodynamic relationship between teacher and student. The major cause of reading failure is dyspedagogia *i.e.*, lack of good teaching. Inadequacy in the child's teacher and the teaching environment are the answer to remediation.

The model of remediation suggested are not mutually exclusive. A teacher can use one or more of the several approaches to deal with the situations. Koppitz (1973) stated.

".....learning disabilities can not be corrected or cured by a specific teaching method or training technique. It is imperative that teachers have a wide range of instructional materials and techniques at their disposal and that they are imaginative and flexible enough to adapt these to specific needs of their pupils".

REVIEW EXERCISES

Answer the following questions within 500 words each :

1. Who is a learning disabled child ? Explain.
2. What are the identification procedures for LD children ?
3. What are the characteristics of LD children ?
4. What are the causes of learning disability ?
5. How would you teach learning disabled children ?
6. What kind of specific techniques can be used to teach such children ?

Write in 50 words each specific characteristics of learning disabled children in the areas of :

1. Motor activities

2. Emotional activities
3. Perceptual activities
4. Symbolic activities
5. Attention process
6. Memory activities.

Write whether the statements are True or False :

1. LD arises because of minimal brain dysfunction.
2. LD arises due to disorders in one or more basic psychological processes.
3. LD children are hyperactive.
4. LD children have low IQ.
5. 1 to 3% children are LD.

Fill in the blanks :

1. LD children display persevation in.....activity.
2. LD children are emotionally.....
3. LD children do not have attention.....
4. LD children display memory.....
5. LD children are intellectually.....

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Policy, Action Programmes, and Plans for the Welfare of Children

NATIONAL POLICY FOR CHILDREN, (1974)

The Government of India have developed and approved the National Policy for children and have communicated it to the various governments, in states and union territories. This is stated below and any one interested in child development and child welfare must be aware of such provisions and resolutions.

INTRODUCTION

The nations's children are a supremely important asset. Their nurture and solicitude are our responsibility. Children's programmes should find a prominent part in our national plans for the development of human resources, so that our children grow up to become robust citizens, physically fit, mentally alert and morally healthy, endowed with the skills and motivations needed by society. Equal opportunities for development of all children during the period of growth should be our aim, for this would serve our larger pupose of reducing inequality and ensuring social justice.

GOALS

Thè needs of children and our duties towards them have been expressed in the Constitution. The Resolution on a National Policy on Education, which has been adopted by Parliament, gives direction to State Policy on the educational needs of children. We are also party to the U.N. Declaration of the Rights of the Child. The goals set out in these documents can reasonably be achieved by judicious efficient use of the available national resources. Keeping in view these goals, the Government of India adopts this Resolution on the National Policy for Children.

POLICY AND MEASURES

It shall be the policy of the State to provide adequate services to children,

both before and after birth and through the period of growth, to ensure their full physical, mental and social development. The State shall progressively increase the scope of such services so that, within a reasonable time, all children in the country enjoy optimum conditions for their balanced growth. In particular, the following measures shall be adopted towards the attainment of these objectives :

(*i*) All children shall be covered by a comprehensive health programme.

(*ii*) Programmes shall be implemented to provide nutrition services with the object of removing deficiencies in the diet of children.

(*iii*) Programmes will be undertaken for the general improvement of the health and for the care, nutrition and nutrition education of expectant and nursing mothers.

(*iv*) The State shall take steps to provide free and compulsory education for all children up to the age of 14 for which a time-bound programme will be drawn up consistent with the availability for resources. Special efforts will be made to reduce the prevailing wastage and stagnation in schools particularly in the case of girls and children of the weaker sections of society. The programme of informal education for pre-school children from such sections will also be taken up.

(*v*) Children who are not able to take full advantage of formal school education shall be provided other forms of education suited to their requirements.

(*vi*) Physical education, games, sports and other types of recreational as well as cultural and scientific activities shall be promoted in schools, community centers and such other institutions.

(*vii*) To ensure equality of opportunity, special assistance shall be provided to all children belonging to the weaker sections of the society such as children belonging to the Scheduled Castes and Scheduled Tribes and those belonging to the economically weaker sections both in urban and rural areas.

(*viii*) Children who are socially handicapped, who have become delinquent or have been forced to take to begging or are otherwise in distress, shall be provided facilities for education, training and rehabilitation and will be helped to become useful citizens.

(*ix*) Children shall be protected against neglect, cruelty and exploitation.

(*x*) No child under 14 years shall be permitted to be engaged in any hazardous occupation or be made to undertake heavy work.

(*xi*) Facilities shall be provided for special treatment, education, rehabilitation and care of children who are physically handicapped, emotionally disturbed or mentally retarded.

(*xii*) Children shall be given priority for protection and relief in times of distress or natural calamity.

(*xiii*) Special programmes shall be formulated to spot, encourage and assist gifted children, particularly those belonging to the weaker sections of society.

(*xiv*) Existing laws should be amended so that in all legal disputes, whether between parents or institutions, the interests of children are given paramount consideration.

(*xv*) In organising services for children, efforts would be directed to strengthen family ties so that full potentialities of growth of children are realised within the normal family, neighbourhood and community environment.

PRIORITY IN PROGRAMME FORMULATION

In fromulating programmes in different sectors, priority shall be given to programmes relating to :

(*a*) preventive and promotive aspects of child health;

(*b*) nutrition for infants and children in pre-school age along with nutrition for nursing and expectant mothers;

(*c*) maintenance, education and training of orphan and destitute children;

(*d*) creches and other facilities for the care of children of working or ailing mothers; and

(*e*) care, education, training and rehabilitation of handicapped children.

CONSTITUTION OF NATIONAL CHILDREN'S BOARD

During the last two decades we have made significant progress in the provision of services for children on the lines detailed above. There has been considerable expansion in the health, nutrition, education and welfare services. Rise in the standard of living, wherever it occurred, has indirectly met children's basic needs to some extent. But all this work needs a focus and a forum for planning and review, and proper coordination of the multiplicity of services striving to meet the needs of children. A National Children's Board shall be constituted to provide this focus and to ensure at different levels continuous planning, review and coordination of all the essential services. Similar Boards may also be constituted at the State level.

ROLE OF VOLUNTARY ORGANISATIONS

The Government shall endeavour that adequate resources are provided for child welfare programmes and appropriate schemes are undertaken. At the same time, voluntary organisations engaged in the field of child welfare will continue to have the opportunity to develop, either on their own or with State assistance in the field of education, health, recreation and social welfare services. India has a tradition of voluntary action. It shall be the endeavour of the State to encourage and strengthen voluntary action so that State and

voluntary efforts complement each other. The resources of voluntary organisations, trusts, charities and religious and other endowments would have to be tapped to the extent possible for promoting and developing child welfare programmes.

LEGISLATIVE AND ADMINISTRATIVE ACTION

To achieve the above aims, the State will provide necessary legislative and administrative support. Facilities for research and training of personnel will be developed to meet the needs of the expanding programmes and to improve the effectiveness of the services.

PEOPLE'S PARTICIPATION

The Government of India trusts that the policy enunciated in this statement will recieve support and cooperation of all sections of the people and of organizations working for the children. The Government of India also calls upon the citizens, State governments, local bodies, educational institutions and voluntary organisations to play their part in the overall effort to attain these objectives.

NATIONAL POLICY ON EDUCATION 1986 (R) MHRD. GOVERNMENT OF INDIA

EARLY CHILDHOOD CARE AND EDUCATION (EXRACT)

The Govt. of India have formulated a National Policy on Education, 1986 and included early child care and education as a salient feature. This is extracted (relevant portions only) below for the benefit of students.

EARLY CHILDHOOD CARE AND EDUCATION

The National Policy of Children specially emphasises investment in the development of the yound child, particularly children from sections of the population in which first generation learners predominate.

Recognising the holistic nature of child development, *viz.*, nutrition, health and social, mental, physical, moral and emotional development, Early Childhood Care and Education (ECCE) will receive high priority and be suitably integrated with the Integrated Child Development Services programme, wherever possible. Day-care centres will be provided as a support service for universalisation of primary education, to enable girls engaged in taking care of siblings to attend school and as a support service for working women belonging to poorer sections.

Programmes of ECCE will be child-oriented, focussed around play and the individuality of the child. Formal methods and introduction of the 3 R's

will be discouraged at this stage. The local community will be fully involved in these programmes.

A full integration of child care and pre-primary education will be brought about, both as a feeder and a strengthening factor for primary education and for human resource development in general. In continuation of this stage, the School Health Programme will be strengthened.

ELEMENTARY EDUCATION

The new thrust in elementary education will emphasis two aspects : (*i*) universal enrolment and universal retention of children up to 14 years of age, and (*ii*) a substantial improvement in the quality of education.

CHILD-CENTERED APPROACH

A warm, welcoming and encouraging approach, in which all concerned share a solicitude for the needs of the child, is the best motivation for the child to attend school and learn. A child-centered and activity-based process of learning should be adopted at the primary stage. First generation learners should be allowed to set their own pace and be given supplementary remedial instruction. As the child grows, the component of cognitive learning will be increased and skills organised through practice. The policy of non-detention at the primary stage will be retained, making evaluation as disaggregated as feasible. Corporal punishment will be firmly excluded from the educational system and school timings as well as vacations adjusted to the convenience of children.

SCHOOL FACILITIES

Provision will be made of essential facilities in primary schools, including at least two reasonably large rooms that are usable in all weather, and the necessary toys, blackboards, maps, charts, and other learning material. At least two teachers, one of whom a woman, should work in every school, the number increasing as early as possible to one teacher per class. A phased drive, symbolically called **Operation Blackboard** will be undertaken with immediate effect to improve Primary Schools all over the country. Government, local bodies, voluntary agencies and individuals will be fully involved. Construction of school buildings will be the first charge on NREP and RLEGP funds.

NON-FORMAL EDUCATION

A large and systematic programme of non-formal education will be launched for school drop-outs, for children from habitations without schools, working children and girls who cannot attend whole-day schools.

Modern technological aids will be used to improve the learning environment of NFE centres. Talented and dedicated young men and women from the local community will be chosen to serve as instructors, and particular attention paid to their training. Steps will be taken to facilitate their entry into the formal system in deserving cases. All necessary measures will be taken to ensure that the quality of non-formal education is comparable with formal education.

Effective steps will be taken to provide a framework for the curriculum on the lines of the national core curriculum, but based on the needs of the learners and related to the local environment. Learning material of high quality will be developed and provided free of charge to all pupils. NFE programmes will provide participatory learning environment, and activities such as games and sports, cultural programmes, excursions, etc.

Much of the work of running NFE centres will be done through voluntary agencies and panchayati raj institutions. The provision of funds to these agencies will be adequate and timely. The Government will take over-all responsibility for this vital sector.

A RESOLVE

The New Education Policy will give the highest priority to solving the problem of children dropping out of school and will adopt an array of meticulously formulated strategies based on micro-planning, and applied at the grass-roots level all over the country, to ensure children's retention at school. This effort will be fully coordinated with the network of non-formal education. It shall be ensured that all children who attain the age of about 11 years by 1990 will have had five years of schooling, or its equivalent through the non-formal stream. Likewise, by 1995 all children will be. Provided free and compulsory education upto 14 years of age.

EDUCATION OF HANDICAPPED

The Handicapped

The objective should be to integrated the physically and mentally handicapped with the general community as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence. The following measures will be taken in this regard :

(*i*) Wherever it is feasible, the education of children with motor handicaps and other mild handicaps will be common with that of others.

(*ii*) Special schools with hostels will be provided, as far as possible at district headquarters, for the severely handicapped children.

(*iii*) Adequate arrangements will be made give vocational training to the disabled.

(*iv*) Teachers' training programmes will be recriented, in particular for teachers of primary classes, to deal with the special difficulties of the handicapped children; and

(*v*) Voluntary effort for the education of the disabled, will be encouraged in every possible manner.

PROGRAMME OF ACTION-1992 MHRD. GOVT. OF INDIA

EARLY CHILDHOOD CARE AND EDUCATION

The Present Situation

The National Policy on Education (NPE) has given a great deal of importance to Early Childhood Care and Education (ECCE). It views ECCE as a crucial input in the strategy of human resource development (HRD), as a feeder and support programme for primary education and as a support service for working women of the disadvantaged sections of the society. It has also taken into account the holistic nature of ECCE and has pointed out the need for organising programmes for the all-round development of the child. It specifically focusses on the need for early care and stimulation of children belonging to the vulnerable sector. Since the age span covered by ECCE is from conception to 6 years, emphasis has been given to a child-centred approach, play way and activity based learning in place of formal methods of teaching and early introduction of the three R's. The importance of community involvement has also been highlighted. Emphasis has been given to establishing linkage between Integrated Child Development Service (ICDS) and other ECCE programmes.

The Revised Policy Formulations reiterate the postulates of NPE, 1986 on ECCE. The prescriptions of POA, 1986 continue to be of relevance. What is attempted here is to update the POA, 1986 taking into account the developments since then and the need to strengthen the programmes by, *inter-alia*, improving the programme components, co-ordination mechanism and enlisting community participation in mobilising resources, planning and monitoring.

Realising the crucial importance of rapid physical and mental growth during early childhood, a number of programmes of ECCE were started particularly after the National Policy for children (1974). The existing ECCE programmes include;

(*i*) ICDS.

(*ii*) Scheme of assistance to voluntary organisations for conducting Early Childhood Education (ECE) centres.

(*iii*) Balwadis and day-care centres run by voluntary agencies with Government's assistance.

(*iv*) Pre-primary schools run by the State Governments, Municipal Corporations and other government and non-government agencies.

(*v*) Maternal and child health services through primary health centres and sub-centres and other agencies.

ICDS is currently the biggest programme of early childhood development, with 2.90 lakh Anganwadis serving nearly 140 lakh children and about 27 lakh mothers; 91.5% ICDS projects are located in rural and tribal areas and 8.5% in urban slums. Besides the ICDS, by the end of 1991-92, there were 12,470 creches with a coverage of about 3 lakh children below 5 years, 4,395 ECE centres in 9 Educationally Backward (EB) States and the Balwadi Nutrition programme serving nearly 2.30 lakh children in the age-group of 3-5 years.

Over the recent years, a number of initiatives have been taken to make the programmes more focussed. The measures under ICDS, include emphasis on practical training for Anganwadi workers, and extension work by Anganwadi training centres; which are required to adopt 10 Anganwadis each for developing them as model Anganwadis. To build up resource capabilities in the field, action is afoot to develop CDPO's office into resource centre. Instructional materials for Anganwadi Training Centres are also under preparation. Efforts are also being made to distribute education cum play materials to Anganwadis to improve their pre-school education component. Intitiative has also been taken to improve the scheme of creches by reviewing norms for voluntary and community participation. A scheme has been worked out by the Department of Women and Child Development for converging the services under DWCRA, ICDS, pre-school education and related schemes of the Departments of Health, Family Welfare, and Rural Development.

Targets and Phasing

The aim of ECCE is that every child should be assured access to the fulfilment of all basic needs. As such efforts will be made towards universalisation of ICDS by A.D. 2000. By the end of the Eighth Plan, 3.75 lakh Anganwadi centres would be established and by A.D. 2000 seven lakh Anganwadi centres. Anganwadis will be gradually converted into Anganwadis-cum-creches. By the end of Eighth Plan, 25 per cent of Anganwadis will be converted into Anganwadis-cum-creches. Qualitative improvement of ongoing ECCE programmes would receive high attention. New cost-effective designs of ECCE will also be encouraged and supported.

Strategy of Implementation

The ECCE involves the total development of child, *i.e.* physical, motor, cognitive, language, emotional, social and moral. The age span under consideration in ECCE is from conception to about 6 years. Even a modest development process during this period includes care of mother during pregnancy (ante-natal health check-up, nutritional support, control of anaemia, immunization for prevention of tetanus following delivery, etc.) hygienic and skilled birth attendance, nutritional care of mother during lactation, correct infant feeding practices, immunization of infant from communicable diseases, mothers' education in the child care, early childhood stimulation, and health and nutritional support throughout. Thus, ECCE is a complex integral function. It requires workers with integrated ECCE training, integrated worksites or ECCE centres where the essential services flow to young children through the period of their growth and preparation for formal education. To tap the full advantage of the synergistic impact of well-integrated ECCE activities and associated programmes, efforts will be directed at coordinated functioning of various agencies—governmental and non-governmental—striving to meet different needs of young children. An Inter-ministerial committee will be set up comprising representatives of Departments of Labour, Education, Rural Development and other related Ministries/Departments to plan, coordinate and monitor the programme. This will be done by the Department of Women and Child Development which will function as the nodal agency for ECCE programme.

Community and parental participation will be enlisted wherever possible in resource mobilisation, planning and implementation. To this end village/ mohalla level committees with adequate representation of mothers will be organised. The role of capable voluntary agencies will be emphasized to create a wide and rich network of resources for ECCE. At the same time, it is imperative that proliferation of sub-standard institutions of ECCE is discouraged. Norms and minimum standards will be devised.

Ongoing programmes/schemes that reflect a concern for the holistic development of young children will be improved to provide effectively integrated services. These include :

(*a*) **ICDS.** The following initiatives that have been introduced will be continued and strengthened :

(*i*) Assigning each Anganwadi Workers' Training Centre the responsibility of development at least 20-25 Anganwadi Centres so as to provide the trainees with adequate field practice.

(*ii*) Placing trainees for a minimum of one month in the Anganwadis for practical training.

(*iii*) Development of instructional materials for use of trainers and the trainees.

(*iv*) Providing materials for children-picture books, picture posters, minimum essential play materials to all Anganwadis and replenishing them periodically.

(*v*) Developing the CDPO's office into a resource centre that is equipped with training materials.

(*vi*) Coordinating the timings of ICDS Anganwadis with the primary schools wherever possible.

In addition, efforts will also be made :

1. To orient trainers, supervisors and CDPOs through refresher courses in pre-school education component and through field training both at pre-service and in-service levels,
2. to convene periodic workshops for functionaries of related programmes to optimise resources and strengthen programme linkages,
3. to develop a small percentage of Anganwadis as day-care centres, and
4. to effect convergence of services and functions of ICDS and other related schemes.

(*b*) **ECE Centres.** The ECE Scheme, as it stands, does not have a component of nutrition; neither does it have any provision for the training of teachers. The following measures will, therefore, be taken with immediate effect :

(*i*) Adding nutrition component with parent/community assistance.

(*ii*) Provision for training the personal.

(*iii*) Supply of educational materials for children.

(*iv*) Using play-way method and discouraging early teacher of the three R's.

(*v*) System of monitoring.

(*c*) **Balwadis run by voluntary Agencies.** There are varieties of patterns in the Balwadis. Each scheme has its own history and background. All programmes of child development implemented approach, offering a comprehensive package and avoiding duplication. Where this does not happen, the existing activities will be merged in some comprehensive and integrated programme. Most of the programmes run by voluntary agencies do not have all the compnents of health, nutrition and education. They need to be converted into total child development centres.

(*d*) **Pre-primary schools and classes.** They essentially focus on education. Therefore, they require :

(*i*) Adding components of nutrition with community/parent participation.

(*ii*) Discouraging the early introduction of the three R's.
(*iii*) Using play-way method.
(*iv*) Developing a relationship between home and community.
(*v*) Discouraging entrance tests for admission.

(*e*) **Day Care Centres.** The creches and day-care centres run with/ without Government support otherwise need to be reviewed and strengthened on an immediate basis. The following requirements will be ensured :

(*i*) Timing co-terminus with school working hours or mother's working hours
(*ii*) Adequate, safe and hygienic space
(*iii*) Adequate child worker ratio
(*iv*) Safe drinking water
(*v*) Supplementary nutrition
(*vi*) Paramedical care under medical supervision
(*vii*) Minimum equipment including linen and cradles
(*viii*) Toys and play materials
(*ix*) Training and supervision of workers

Besides strengthening existing programmes, emphasis during the Eighth Plan and thereafter will also be on experimentation for evolving low cost and context specific models. The models which are in experimentation stages, at the moment, would be encouraged and expanded. Appropriate agencies will undertake a survey of such models. Some of the models which are already being experimented with, which have much promise are as follows :

(*a*) Home Based Model (from conception of 6 years)

This model involves developing techniques of stimulation that can be taught to parents or other members of the family to foster child development. It requires (*i*) training of local women who will play the leadership role in conducting home visits and ecouraging family members to conduct stimulation programmes for their children, (*ii*) development of low cost play materials to be used by the family, (*iii*) development of audio and video programmes for the mass media for wide implementation, and (*iv*) creation of a mobile supervisory cadre.

(*b*) Day-care Centres (from birth to 6 years)

This model is a support service to free older children and working women. Some voluntary orgnisations are successfully implementing these programmes. Such Day-care centres should be established at all work sites where women are employed in substantial numbers. While support for voluntary agencies should be provided on a liberal scale by Government the expenditure on the centres run on work sites should be the responsibility of the employers.

(c) Family Day-care Centres

This is best suited for areas where the target group is very small and a Day-Care Centre may or may not be viable. In this model, a suitable woman from the same group is identified as the home-care worker, and given the necessary materials, training, supervision and infrastructural support, including food, to take care of five or six children in her own home. It is envisaged that every cluster of about 10 home care units would be supervised, guided and supported by a supervisory worker who is competent to give the necessary support.

Keeping in mind the role of ECCE as a support service in Universalisation of Elementary Education (UEE), as well as for HRD, ECCE will continue to be directed to the most under-privileged groups, those who are still outside the main-stream of formal education. Some of these can be defined as follows :

(*i*) Very poor urban slum communities;
(*ii*) Ecologically deprived areas where children are required to fetch fuel, fodder, water and do other household chores;
(*iii*) Family labour and household chores in rural areas an artisan households;
(*iv*) Itinerant, or seasonal labour, who have a mobile and transient life-style, like road workers;
(*v*) construction workers in rural and urban areas;
(*vi*) landless agricultural labour;
(*vii*) nomadic communities and pastoralists;
(*viii*) forest dewellers and tribals in remote areas;
(*ix*) residents of remote isolated hamlets.

Girls in these groups may require support services like child care, sometime in very small units. Special attention should be given to scheduled castes and scheduled tribes in all the above defined categories.

Appropriate linkages will also be developed between ECCE, primary schools and Non-Formal Education (NFE) Centres. Two-way interaction between the Anganwadi workers and school teachers/NFE instructors will be encouraged. Suitable space will be provided for ECCE close to primary schools.

MEDIA

Media support will be developed and fully utilized for conveying to the parents and community the significance of ECCE. It is equally necessary for the training of personnel in ECCE. Attention should also be paid to the development of stimulating programmes for children. Concerted efforts will

be made by all concerned organisations such as Doordarshan, NCERT, NIPCCD and other related organisations in developing software in all major regional languages.

PERSONNEL

Crucial to the success of any programme is mobilizing an adequate number of workers, designing suitable incentives to sustain their motivation towards work and equipping them for efficient functioning through proper training. Since ECCE programmes aim not just providing custodial care, but initiating developmental processes, the workers force would need to be suitably augmented in accordance with the diverse components of the programmes. This will require an improvement in child-worker ratio, wherever feasible.

Working conditions of ECCE functionaries will also need attention, especially in terms of adequate honoraria/remuneration. Efforts will be continued to see that in case of day-care centres, the remuneration of full time workers is not less than the wages earned by unskilled workers. The long term goal would be to bring the trained full-time child care workers on par with primary school teachers. Part-time child care workers should be paid not less than minimum wages proportionate to their hours of work. To ensure proper supervision, ratio of supervisors to the number of ECCE Centres should be improved. Considering the nature of work, which requires rapport with mothers and tenderness to children, ECCE workers and their supervisors should preferably be women.

TRAINING

In all models of ECCE programmes, the component of training will be strengthened. Training would include a strong component of field placement under supervision. As the early childhood care and education programmes are bound to expand considerably over the next two decades, corresponding training facilities will be available for all levels of functionaries. Following would be some of the important parameters for meeting the training requirements :

- Initiating a two-year vocational course in ECCE at +2 level with the objective of creating basic skills which can later be adopted through job training for specific situations;
- Strengthening the educational content of ICDS functionaries training by providing appropriate training inputs, resources, materials etc., and extending it, where possible, to include a component on day care.
- Review of the existing training programme of ECCE.
- Working out flexible models for day-care training at field level.

— Taking steps for setting up a higher course in ECCE for senior level functionaries of ICDS, trainers in the various training institutions and the supervisory personnel;
— Creating a system of accreditation of training institutions dealing with ECCE.

Greater technical resource support to ECCE programmes need to be given through NCERT / SCERTs / SRCs and DIETs. DIETs should play a pivotal role for technical resource support to ECCE programmes and functionaries in key areas like training, curriculum development transaction etc. These institutions should be strengthened with necessary infrastructures and resources to equip them for this. Resource capabilities of NGOs and VAs will also be drawn upon.

CONTENT AND PROCESS

The content of pre-school programme should provide inputs for a total development of child faculties. This would mean providing components of health, nutrition and education. Illustratively, these would include :

— regular medical checkup of children with follow up and referral services where necessary.
— daily provision of supplementary nutrition in accordance with the nutritional status of children.
— Growth monitoring through maintenance of height and weight through monthly/bimonthly records.
— Child centred, and development and process oriented play activities planned in a manner to expose children to a variety of experiences that foster a sense of joy and curiosity.
— Promote language skills and cognitive curiosity.
— Foster joy and creativity and confidence.
— Promote muscular development.

Daily activities should be planned according to the age and developmental levels of the children. There should be a flexible balance of activities for all aspects of development as well as a balance between individual and group activities, indoor and outdoor activities, vigorous and quiet activities and guided and free activities.

Medium of communication should be mother tongue/regional language. There should be a link between the mother tongue and the dominant language of the region.

REVIEW

With a view to improving the quality of ECCE, a comprehensive review of the existing ECCE programmes will be undertaken with special emphasis on

pre-school curriculum, teaching/learning material, training including issues of accreditation and vocationalisation, monitoring and linkages with primary schooling. It is imperative to discourage proliferation of substandard institutions of ECCE. Norms and minimum standards will be devised with a view to ensuring better quality and healthy practices.

MONITORING AND EVALUATION

The system of monitoring and evaluation will be strengthened on the following lines :

(*i*) A management Information System will be evolved for monitoring all ECCE programmes. Information will be collected, compiled, analysed and acted upon at the block/local authority level. The flow of information to different levels (District, State, Centre) will be so planned that control functions at these levels can be performed effectively without delay.

(*ii*) Professional institutions and expert bodies will be involved in independents, objective evaluation that can identify gaps and problems and feasible alternatives for remedial action.

EDUCATION OF THE HANDICAPPED GOI, MHRD

PRESENT SITUATION

It is estimated that about 12.59 million children with disabilities are to be provided education in the school system. The details are as follows :

Figures in Million

Projected Population of children with disability in the age-group 5-14 years *		3.19
Locomotor Handicap	1.48	
Hearing Handicap	0.65	
Speech Handicap	0.91	
Visual Handicap	0.15	
Mentally retarded children in the age group 5-14**		3.60
Children with learning disability in the age group 5-14		3.60
Children with disability in the age group 16-18 years.		2.20

* The 1981 figures of the survey by NSSO have been extrapolated on the assumption that population with disabilities would have grown at the same rate as the general population.

** Estimated at 1% of the population in the age group 5-14 years.

Out of these, about half a million require vocational training.

The educability of another 2 million disabled children is to be improved through early intervention and services by ECCE.

At the end of 1991-92 about 30,000 children with disability were availing special benefits under the scheme of Integrated Education for Disabled Children (IEDC). In addition, about 60,000 children with mild disabilities received resource support without special benefits. A large number of children with disability are also receiving education in special schools which number about 1035.

The project Integrated Education for Disabled (PIED) is being implemented, as a field demonstration, in one block each in ten States and Union Territories. In these blocks about 90 per cent of children with disability are receiving education in general schools. The cost per pupil in these blocks is now around Rs. 2,000/- and is likely to come down further as the number of beneficiaries increases. General teachers feel confident and motivated as their status in the community has improved due to the services they provide.

The innovative multi-category training of resource teachers has been found to be effective and has been institutionalised in the Regional Colleges of Education, the universities offering special education courses and the training programmes organised by Non-Governmental Organisations.

Each DIET has been provided a resource centre for orienting elementary teachers and establishing field demonstrations in lab areas. Faculty from 102 DIETs have so far received induction training at the NCERT.

The Ministry of Welfare had taken steps to ensure supply of trained manpower to special schools and improve standards in these schools through the National Institutes for the Handicapped (NIHs) and increased support to NGOs.

The Ministry of Labour manages 17 Vocational Rehabilitation Centres (VRCs) for the handicapped and helps in their placement also. About 66,000 persons with disability have been rehabilitated under this scheme by September, 1991. Three per cent of seats for admission to ITIs and under the Apprenticeship Training Scheme are available for handicapped persons. These seats are being fully utilised.

The evaluation of special schools and the scheme of IEDC has revealed some grey areas. General education system is not yet mobilised, to a noticeable extent, for education of the handicapped, either at the Central or State level. Inputs from different schemes like CBR, DRC, ECCE, non-formal education, adult education, vocational and technical education, etc.

are not being brought together for the education of the physically handicapped. Some States are still reluctant to implement IEDC while some are implementing it rather indifferently. Few NGOs are active in rural areas. The standard of education in special schools needs improvement. Facilities for the education of children with multiple handicaps are yet to be developed. The early detection and intervention programmes so essential for education of these children have yet to be started. The goal of UEE for this disadvantaged group would remain an unachievable dream unless concerted and urgent measures are taken.

NPE REVIEW PERSPECTIVE

As part of its concern for equalisation of educational opportunities, the NPE, 1986 focuses on the needs of children with disabilities. The NPE, 1986 recommended an integrated education in general schools for children with locomotor handicaps and with other mild disabilities, orientation and pre-service training of general teachers too meet special needs of these children, provision of vocational training, establishment of special schools for severely disabled children and encouragement of voluntary organisations in these tasks. The POA suggested a pragmatic placement principle. It postulated that a child with disability who can be educated in a general school should be educated in a general school only and not in a special school. Even those children who are initially admitted to special schools for training in plus curriculum skills should be transferred to general schools once they acquire daily living skills, communication skills and basic academic skills.

TARGETS

For achieving equalisation of educational opportunities, children with disability should have access to quality education comparable to other children. However, considering the financial resources likely to be available during the 8th Plan the targets for education of disabled childen would be as follows :

(*i*) Children who can be educated in general primary schools
  (*a*) Universal enrolment by the end of 9th Five Year Plan.
  (*b*) Ensuring achievement of minimum level of learning through adjustment and adaptation of curriculum and teaching to special needs.

(*ii*) Children who require to be educated in special schools or special classes in general schools
  (*a*) Universal enrolment by the end of the 9th Five Year Plan.
  (*b*) Ensuring achievement of level of learning commensurate with their potential.

(*iii*) Reduction of dropout rates on par with other children.

(*iv*) Providing access to disabled children to secondary and senior secondary schools with resource support and making special provision for vocational training of these children, particularly those with intellectual disabilities.

(*v*) Reorienting pre-service and in-service teacher education programme including pre-school teachers training programmes to meet special needs in the classroom.

(*vi*) Reorienting adult and non-formal education programmes to meet educational and vocational training needs of persons with disability.

IMPLEMENTATION STRATEGIES

The strategy of area-specific and population-specific micro-planning for UEE is equally relevant for this disadvantaged group. Planning for UEE and adult literacy at all levels — Centre, State, District, Block and Project — should provide for the educational needs of this category of children.

Education of children with disability will be a component in the training of educational planners and administrators as well as preservice and inservice teachers. DIETs, CTEs and IASEs which have been provided facilities for this component will have to pay particular attention to this aspect of teacher training. While drawing up schemes for strengthening, SCERTs, cells for education of the handicapped may be considered as envisaged in IEDC.

The material supplied under operation Blackboard will have to take into consideration special needs of these children. School buildings will have to take note of architectural adjustments needed to ensure access to children with disability, at the construction stage itself so as to avoid expenditure on modifications later on. Special schools need to be opened in the districts which have no special school facilities. The education of the handicapped should form an essential component in all externally assisted basic education projects being implemented or proposed to be implemented.

INTEGRATED EDUCATION FOR DISABLED CHILDREN (IEDC)

The POA, 1986 target of increasing enrolment of children by 25 per cent per year was achieved as enrolment of disabled children in general schools increased from 15,000 to 30,000. Subject to availability of resources, the cumulative enrolment would reach 50,000 by the end of the 8th Plan. However, an additional 1,00,000 children with mild disabilities will be provided resource support from teachers and learning aids and equipment.

The following actions are needed for achieving the targets laid down :

(*i*) Adequate allocations of resources.

(*ii*) Provision for education of persons with disability should be made an integral component in externally assisted basic education projects.

(*iii*) Provision for education of disabled children should be made in the Centrally Sponsored Schemes of Operation Blackboard, Vocationalisation of Education and Non-Formal Education.

(*iv*) Co-ordinated implementation of schemes like Community Based Rehabilitation, ECCE, VRCs and IEDC so as to reduce cost and achieve higher coverage. This would require coordination among the Ministries/Departments of Health, Welfare, Education, Women and Child Development and Labour.

(*v*) The NGOs have to be encouraged to implement IEDC, particularly in rural areas. The NGOs involved in other educational activities will be encouraged to work in this area also and assisted in developing their expertise.

SPECIAL SCHOOLS

The POA envisaged provision of an additional 400 special schools at the district headquarters. However, because of resource constraints no new special school has been established. The Ministry of Welfare has identified 240 districts without any special schooling facility. Efforts would be made to provide special schools in these districts by the end of 9th Five Year Plan.

VOCATIONAL TRAINING

The Ministry of Labour is providing vocational training to the handicapped through the Craftsman Training Scheme (CTS), the Apprenticeship Training Scheme and Separate Vocational Rehabilitation Centres (VRCs). Three per cent of the seats for admission to ITIs under the Craftsman Training Scheme and Apprenticeship Training Scheme are reserved for candidates who are handicapped but have aptitude and are otherwise fit to undergo the required training. The States/UTs have been advised from time to time to implement this reservation for the handicapped which will be continued during the 8th Plan also. Seventeen VRCs will continue to provide training to a larger number of handicapped persons during the 8th plan. The instructors in ITIs will receive orientation to meet special needs of handicapped persons. This component will be added in ITI instructor's training programme. Adjustment and adaptation of equipment to provide full access to disabled persons will be ensured.

The National Institutes for the Handicapped under the Ministry of Welfare will continue their efforts to provide vocational training to the handicapped.

The Department of Education will also encourage voluntary organisations working in the area of vocational education and training for the handicapped.

The CIVE will provide support to vocational training programmes for the handicapped through teacher training material and other resources.

ORIENTATION AND TRAINING OF TEACHERS

All the DIETs to be established by the end of the 8th Plan will have a resource room and trained faculty to teach the essential component of education of children with disability. They will also run orientation programmes for teachers at least from lab areas and practising schools of establish field demonstration of IEDC programme. The SCERTs will support field demonstrations under the scheme of IEDC. Similar action is suggested for the 250 CTEs and 50 IASEs. The budget provision is available in the scheme itself. The pre-service training curriculum will induct essential components in these areas, wherever it has not been done so far.

All in-service teachers should receive awareness input on education of children with disability in orientation programmes. In each area/institution where IEDC is implemented all teachers will receive orientation as envisaged in the scheme of IEDC. The heads of institutions and educational administrators will also receive training. Considering the large numbers to be covered, the Indira Gandhi National Open University and NCERT should plan credit courses on special education to equip general teachers to meet special needs. The NCERT will provide training to the IEDC cell staff. Multicategory training of resource teachers will be encouraged in UGC supported programmes.

TRAINING OF EDUCATIONAL ADMINISTRATORS

The NIEPA in collaboration with NCERT should develop programmes for training educational administrators and making them aware of the needs of this group. The IGNOU should design and offer courses for this target group also.

SPECIAL TEACHERS

The NIHs and its regional training centres have built up capacity to train single disability special teachers for special schools. Besides meeting demands of the new specail schools, the existing untrained teachers will be trained and backlog cleared by the end of the 8th Plan. In-service training of special teachers will be planned in a way that each teacher receives a three-week course every four years.

Efforts will be made to promote special education units in university departments of education for training teachers to handle multicategory disabilities.

EDUCATIONAL AND VOCATIONAL GUIDANCE PERSONNEL

The existing educational and vocational guidance counsellors should be provided training in dealing with disabled children and their parents. Essential component should also be added to their preservice training programmes. The NCERT and NIHs should design and offer in-service course for in-service consellors.

CONTENT AND PROCESS

Curriculum flexibility is of special significance for these children. Special needs of these children will be met, if child centered education is practised. The curriculum adjustment and adaptation of teaching methods and material will be worked out, field tried and provided to the users. The following actions will be taken :

(*i*) Guidelines for child centred education, including special needs in the classroom, being developed at the NCERT will be made available by mid 1993.

(*ii*) Guidelines for adjustment of curriculum and instructional material and methods for visually and hearing handicapped at primary level have been developed. These will be made available to teachers. Work for upper primary and secondary school level will be started and completed by the end of 1994.

(*iii*) The achievement of minimum levels of learning by children with mild disabilities should be ensured through resource support and alternative learning material, wherever needed.

(*iv*) The Boards of Examination should make adjustment and adaptations in examination for the handicapped children.

(*v*) Study of more than one language should not be compulsory for deaf children.

(*vi*) Teaching of Science and Mathematics is either not available to handicapped children or they opt for an easier substitute. Special efforts should be made by the NIHs and the NCERT to develop an action programme to improve access of disabled children to these important areas.

(*vii*) Child-to-child help in education of children with disability is an effective resource in view of large classes and multigrade teaching. NCERT should develop a package and make it available to teachers by the end of 1993.

(*viii*) The special learning aids and equipment like braille books, braille kit, audio visual material will be developed and made available to schools by NIHs and NCERT.

USE OF MASS MEDIA

Radio and television are being used in a limited way both for advocacy as well as educational purposes. The CIET, SIETs, NIHs and other organisations will develop a variety of programmes so that they can be regularly telecast/ broadcast. The MHRD will approach the Ministry of Information and Broadcasting for providing adequate time for this purpose.

The CIET, SIETs and NIHs will also develop software in non-telecast mode and make it available to DIETs, other training centres and NGOs working with disabled persons.

Field publicity units should be utilised by States for advocacy programmes. Newpapers and magazines have started popular advocacy and educational writing in this area. The NCERT and the NIHs will develop packages and hand over to journalists in workshops.

AVAILABILITY OF SPECIAL LEARNING MATERIAL AND AIDS

Learning material in braille is still not available to all children. Same is the case with aids like braille state, Taylor frame, etc. Similarly language training material for speech and hearing handicapped is not available in regional languages. Steps will be taken by the NIVH, AYJNIHH, NIMH and the NCERT to ensure the availability of such material.

MONITORING AND EVALUATION

The availability of a reliable data base is essential for proper monitoring and evaluation of educational programmes for persons with disability. Towards this end the District Education Office, must, with the help of other agencies, collect data about the number of disabled persons in the District — disability wise, sex wise and age group wise; beneficiaries under IEDC, special schools, ITIs, VRCs, etc., number of special and resource teachers, their qualifications and pay scale, and budget utilisation. Similar information should also be included in the statistics collected by MHRD as also the Educational Surveys conducted by NCERT.

The MHRD and the Ministry of Welfare should make grants under IEDC and special schools contingent on the periodic returns giving the information. An inter-departmental Committee should be set up at the State and Central levels for monitoring. In addition, regular visits by the officers of the MHRD, NCERT, Regional Colleges of Education and field offices, should lead to status reports.

Evaluation studies by external agencies, universities conducting courses on education and rehabiltation of persons in specific geographical areas will be commissioned by MHRD and the Ministry of Welfare.

HEALTH AND NUTRITION PROGRAMMES IN INDIA

1. **Special nutrition programme Ministry of Welfare.** The scheme started in 1970-71 as a central scheme, provides for supplemetary nutrition to children in the age group of 0-6 years and expectant and nursing mothers in urban slums, tribal and rural areas for 300 days in a year and is administered by the states since the fifth plan as a part of Minimum Needs Programme through a network of feeding centres manned by an organiser and helper each. It provides for 300/500 calories and 10/20 grams of protein daily to children and mothers, respectively.

2. **Integrated child development scheme (ICDS) Ministry of Welfare.** This scheme, started in 1974-75, provides for the following package of services for children up to 6 years and nursing and expectant mothers : immunization, health checkup, referral services, supplementary nutrition, informal pre-school education and nutrition and health education with a view to bring down morbidity and mortality through proper and efficient integration of the services with the anganwadi as the focal point. This scheme has been renamed as integrated child and material welfare development scheme.

3. **Nutrition feeding programme in balwadis.** This programme, started in 1970-71 of supplementary nutrition caters to the children in age group 3-5 years in balwadis and day care centres and operates on a non-plan (100%) grant given by the Ministry to the five all-India organisations *viz.* Central Social Welfare Board, Indian Council of Child Welfare, Harijan Sevak Sangh, Bharatiya Adimjati Sevak Sangh and Kasturba Gandhi National Memorial Trust. It provides for 300 calories and 10 grams of protein per day for 270 days a year.

4. **Mid day meals scheme for school children (MHRD).** This scheme, meant for primary school children, aims at melting not only the nutritional deficiency in children, but also, in attracting and retaining them in the school and operates for 200 days in a year.

5. **Prophylaxis against blindness through, vitamin A (MHFW).** The programme aims to protect children between 1 to 5 years against blindness through Vitamin 'A' administration and covers all the States/Union Territories now.

6. **Prophylaxis against nutritional anaemia (MHFW).** Under this programme, iron and folic acid tablets are given to pre-school children and pregnant and nursing women to combat nutritional anaemia.

7. **Goitre control programme (MHFW).** To provide for the supply of iodised salt to population at risk from goitre in the entire sub-Himalayan belt.

8. **Applied nutrition Programme (MRD).** The programme aims primarily at nutrition education to bring about a change in knowledge of and attitudes about food and food habits in rural areas. I encourages local production of food of nutritive value and envisages holding cooking demonstrations and feeding programmes among mothers and children. This programme is funded by the Ministry for the first 6 years of operation in each block over and above States' own resources.

9. **Intensive development in selected ANP blocks (MRD).** Includes income generating schemes for women, drinking water supply and construction of community centres and is operated by the State Government with the help of UNICEF and Government of India, over and above their own resources.

10. **The programmes of food and nutrition board. (Ministry of Agriculture and Cooperation).**

(*i*) the development and promotion of nutritious foods like miltone, energy and weaning foods and fortification of milk (with Vitamin 'A') and salt (with iron).

(*ii*) dissemination of knowledge on nutrition through 31 mobile units spread all over India, publication of pamphlets, production of films, observance of National Nutrition Weeks and holding of exhibitions.

(*iii*) conducting diet surveys in different State and formulation of balanced diets for the State covered based on the findings of the survey.

11. **Scientific storage of food and grains at domestic level (Ministry of Agriculture and Cooperation).** This scheme aims to create awareness among rural women of losses of food grains duc to bad storage and to educate and train them regarding the need for good storage and the use of fumigants.

REVIEW EXERCISES

Answer the following questions within 500 words each :

1. State the National Policy on children as per Government of India formulations.
2. What are the main recommendations about the education of the Handicapped in the National Policy on Education as per 1986 & 1992 Revised version ?
3. What are the Programmes of Early Childhood Education as per NPE, 1986 & 1992 (R) ?
4. There are systematic programme and man power planning in the case of education of Handicapped. Please state some of the recommendations.
5. What are the measures to be undertaken in the field of early childhood care and education ?
6. State the various programmes on Nutrition introduced by different ministries of Government of India.

Write short notes on : (in about 50 words) :

1. Objectives of welfare of children.
2. Special education programme
3. Applied nutrition programme
4. Integrated child development and maternal welfare services.
5. Balwadis
6. Anganwadies
7. Pre school education
8. Incentive schemes
9. Nutritional development in children
10. Elementary education—measures to accelerate the system.