
UNIT 4 IDENTIFICATION OF PROBLEMS IN SCHOOL CHILDREN AND REMEDIAL MEASURES

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4.0 INTRODUCTION

Schooling, we discussed in the previous unit, is the process whereby society provides its younger members means to live a cultured and happy life. Schooling as a formal institution contributes by intellectually, emotionally, socially and physically transforming children as responsible citizens and individuals. It systematically nurtures their curiosity and by teaching basics gives them a desire to learn more. This desire to learn more differentiates an educated from an uneducated. But all the children may not learn equally. The individual differences exist among them, we all know. But the degree of individual differences may be such which makes it mandatory to provide individualised educational program to facilitate learning. There exists a group of children for whom

it is difficult to learn like an average children of the same age. Such children are called 'exceptional children' or 'children with special needs'. Education of these children is called 'special education'. The exceptionality may be positive or negative. On the one end of it we have 'gifted children' and on the other extreme we have 'children with learning disabilities' and other impairments. Children at both the ends find it difficult to adjust in their group in terms of learning or socially and emotionally. For an educator, it is important to find out the type of difficulty a child is facing. Early recognition of the problems and timely remedial measures could help the child in benefiting from the whole learning process.

In this unit, we will discuss problems in school children and what diagnostic and remedial measures should be taken by an educator to maximise the learning output of children with difficulties.

4.1 OBJECTIVES

After reading this unit, you will be able to:

- define Exceptional children
- describe children with physical handicaps and perceptual difficulties (blind and deaf);
- define Attention deficit and hyperactive children;
- describe Mentally retarded children;
- explain Diagnostic and remedial measures by educators; and
- analyse the issue of Integrated education and mainstreaming.

4.2 EXCEPTIONAL CHILDREN

Kirk (1972: 4)¹ defines an exceptional child as, "child who deviates from the average or normal child (1) in mental characteristics, (2) in sensory abilities, (3) in neuromuscular or physical characteristics, (4) in social or emotional behaviour, (5) in communication abilities, or (6) in multiple handicaps to such an extent that he requires a modification of school practices, or special education services, in order to develop to his maximum capacity".

From the above definition we come to know that

Exceptional children can not profit from the regular school program. Special methods and materials are required to teach them.

The exceptionality may be due to problems in vision, hearing, perceptual-motor, movement related, communication, intelligence, socio-emotional.

Exceptionality has a positive dimension (gifted or talented children) and a negative dimension (handicapped, learning disability, behavioural problems etc.).

There is another group of children referred as *children at risk*. Such children have no learning disability, but they are at a risk to develop it later. The risk factor may be caused by conditions during birth, nurturing, or environment. This group includes students experiencing learning, socialisation and maturational difficulties and difficulties in general classroom.

Special education is defined as individualised educational instruction designed to meet the unique educational and related needs of students with disabilities.

Special education is provided for the following groups of students:

Group A

- 1) Learning disabled
- 2) Speech or language impaired
- 3) Mentally Retarded
- 4) Emotionally or behaviourally disturbed
- 5) Physically impaired
- 6) Autistic
- 7) Deaf-Blind
- 8) Traumatic brain disordered
- 9) Severely Multiple handicapped

Group B

Gifted and talented

Self Assessment Questions 1

Choose the right sentence

- 1) Special educational programs will be required for
 - a) Children with learning disabilities
 - b) Physically impaired children
 - c) Emotionally and behaviourally impaired children
 - d) All of the above
- 2) Exceptional children are those who
 - a) Can profit from the regular school program
 - b) Can not profit from the regular school program and the deviations can be positive or negative
 - c) Only those who deviate positively from the average same age group children
 - d) Only those who deviate negatively from the average same age children
- 3) An educator should aim at
 - a) Discouraging individual differences
 - b) Carefully observing the degree and kind of individual differences and designing individual program to suit the needs of children
 - c) Only b
 - d) Both a and b

4.3 LEARNING DISABILITIES (LD)

Pioneering work to define the nature and causation of the concept learning disability is credited to William Cruickshank in 1950s and 1960s. Samuel Kirk, in 1968, officially sanctioned the term *specific learning disability*.

Learning disability (Reber and Reber, 2001: 391) is “a syndrome found in children of normal or above intelligence characterised by specific difficulties in learning to read (dyslexia), to write (dysgraphia) and to do grade appropriate mathematics (dyscalculia)”.

LD children may show following characteristics (learning disability is often abbreviated as LD):

- LD is a chronic condition of probable neurological origin
- It varies in its manifestation and severity
- It influences individual’s self-concept
- It primarily excludes other disability categories
- An untreated or poorly treated LD can have adverse effects on educational, vocational, social and activities of daily living.
- LD can also be defined as one or more significant defects in essential learning processes.

4.3.1 Characteristics of LD Children

The characteristics of the learning disabled children are:

- LD is a mixed group of disorders.
- Learning disability may transcend the school setting and persist in adulthood
- LD children are normal in intellectual functioning. LD mainly lies in their way of learning and in their perceptual systems.
- Behavioural problems are not initial components of their behaviour, they may feel frustrated due to the gap in learning but they might show emotional problems.
- Boys are more likely to be characterised as LD than girls.
- LD may range from mild to severe. Some student may be passive or inactive, and other may show higher level of physical activity than other students.
- Students may show problem in one area not in the other.
- Delay in developmental milestones.

Behaviour and affective characteristics: hyperactivity or hypoactivity, act impulsively, may overreact with intense and surprising emotions which affect their social adjustment.

Disorders of attention: LD children show problems in sustaining attention (the ability to focus on information), easily distracted, have short attention span

Perceptual motor impairment: Students with learning disabilities often experience poor auditory and/ visual discrimination. They may show problems in directional orientation. They tend to be awkward, clumsy and uncoordinated. They often have poor handwriting.

Disorders of memory and thinking: problems in short or long term memory (acquiring and recalling information) and in metacognition. Metacognition is an ability to monitor and evaluate one's actions. Organising, categorising, arranging and planning will not be adequate.

Specific academic problems (especially in linguistic and calculation skills): LD children are often several years behind their peers in reading, comprehension, fluency and spelling, experience word, letter, number and sound reversals. *Dyslexia* is characterised by serious reading problems. LD students may have problems identifying words and understanding what they read. Oral and written language difficulties compound reading problems. Written language problems include poor handwriting, spelling, sentence structure, and composition skills. These students may have problems in recalling math facts, writing numbers legibly, learning arithmetic concepts and abstract math reasoning.

Disorders of speech and learning speech sounds: may repeat sounds, stumble over words and have halting speech; difficulties in understanding pragmatic aspects of language and also show word finding difficulties

Some central nervous system signs or irregularities

It should however be kept in mind that (i) all LD students do not share all the above characteristics; (ii) some of the above characteristics may be found in students who do not show LD.

4.3.2 Causes of LD

Environmental model holds poor learning environment, unstable families, disadvantaged environments and faulty school instruction responsible for LD. This model is important because improvement of LD according to this model lies in the change in environment: proper schooling and removal of unhealthy influences.

Brain Damage model suggests that 20 percent of students with LD have sustained brain damage or neurological damage. The term minimal brain dysfunction is often used because of the lack of proper neurological causes. It is assumed that the child may have experienced injury to central nervous system during birth or before birth.

Organic and Biological Model suggests that chemicals used in food coloring and flavoring substances, imbalances in neurotransmitters and vitamin deficiency (especially B complex) could cause LD. Developmental or maturation unpreparedness for certain tasks is also believed to underlie some LDs.

Genetic Model suggests an inherited genetic influence may be cause reading and language problems. More research is required to discover the relationship between genetic inheritance and specific LD.

The causes of LD may be embedded in the child as well as in the environment and may be complicated by organic, genetic or biological anomalies.

4.3.3 Identification Process of LD

Early detection or screening is dependent on early observation of behavioural and learning characteristics by class teacher who should possess the knowledge of the symptoms and characteristics of specific learning problems.

A multidisciplinary team including class teacher, school psychologist and other clinical personnel must determine the degree of disability.

Measurements of achievement by teacher made tests, curriculum-based measurement and standardised test is highly recommended. The following tests are used for the assessment and identification of LD:

Wechsler Intelligence Scale for Children-III (WISC-III) for the assessment of cognitive abilities (Wechsler, 1993)².

Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-III) for the assessment of achievement in reading, writing and mathematics by age and grade level (Woodcock & Mather, 1989)³.

Brigance Diagnostic Inventory of Basic Skills for the assessment of a variety of skill sequences in readiness, reading, language arts and math (Brigance, 1983)⁴.

4.3.4 Remedial Programs for LD

Individualised teaching program is required so that the child may get specific instruction in the areas of specific need, like reading, writing or math. Following methods are used as special techniques to teach the children with special needs:

Direct Instruction: This is a highly structured and organised teaching strategy which is started after the analysis of learning problems with specific learning tasks. It is carried on in steps with clear goals to be achieved at each step. Feedback and corrections are used and are shown to affect children's participation and performance positively. Together with DI, *cognitive instruction* is also used. CI emphasises attending, responding, rehearsing, recalling and transferring information.

Multisensory instructional strategies highlight learning by seeing, hearing, touching and movement.

Study skill training or meta-cognitive skills assist students in learning how to take notes and tests, prepare compositions, and remember to bring necessary materials.

Social skill training is used to help children in getting along with peers and adults in various settings and circumstances.

Inclusion strategies are the provisions by state and national authorities that students with learning disabilities should be educated with nondisabled students of their age. Additional instructional resources can be used for children with LD while teaching them in a general classroom. Teachers should make effort to adopt such methods as to enhance the understanding and participation of LD children with other children.

Peer mediated instruction and *computer assisted instruction* are the other methods used. For all these methods to be adequately implemented, it is extremely important that the classroom teacher and school psychologist should be sensitive to the problems and needs of such children and provide appropriate educational settings to LD children.

Self Assessment Questions 2

- 1) Write the specific learning difficulties that the following terms denote:
 - a) dyslexia
 - b) dysgraphia
 - c) dyscalculia

2) Assertion (R): LD is defined as one or more significant defects in essential learning processes.

Reason (R): LD children are normal in intellectual functioning. LD mainly lies in their way of learning and in their perceptual systems.

a) Both A and R are true and R is correct reason for A.

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b) Both A and R are true. R is not a correct reason for A.

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c) A is true. R is wrong.

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d) A is wrong. R is true.

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3) State whether true or false

a) Students may show problem in one area not in the other.

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b) LD is a chronic condition of probable neurological origin.

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c) WISC-III is used for the assessment of writing and mathematics.

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d) Inclusion strategy should not be emphasised by an educator.

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4.4 MENTAL RETARDATION (MR)

A child who scores below 70 on a standardised IQ test and have significant difficulties adapting to his environment is considered mentally retarded. Classification of MR is based on severity: mild, moderate, severe and profound.

The concept of mental retardation “is based purely on IQ test scores; no judgments are made about origins or causes, about emotional, motivational, social or familial factors, or about prognosis” (Reber & Reber, 2001: 430). The terms like educable mentally retarded and trainable mentally retarded are based on the causation of MR.

Causes are divided into two broad categories: physical and cultural/familial causes. Physical causes include genetic and chromosomal disorders and brain damage that occurred prenatally (due to disease, malnutrition, drug exposure), during birth, or

postnatally (due to accident or illness). Almost all cases of severe and profound mental retardation have physical causes. Cultural familial causes are more insidious. The child with cultural familial retardation shows no brain damage but may come from deprived environments and from environments that have dysfunctional elements.

Persons with retardation are unable to make adequate degree of adjustments to many life circumstances because of their limited intellectual and adaptive capacities.

4.4.1 Identification Process MR children

Two types of assessments are required for children to be identified as retarded: intelligence and adaptive behaviours. A student may not be labeled on the basis of one test. Comprehensive testing includes observation of behaviour by teacher, curriculum based assessments, interviewing and standardised tests.

Some of the widely used intelligence tests are: the Stanford-Binet Intelligence Scale (Thorndike, Hagen & Sattler, 1986)⁵, The Revised Wechsler Intelligence Scale for Children –III, The Kaufman Assessment Battery for Children (K-ABC)⁶

Checklist are used to assess adaptive behaviour. Some frequently used checklists are:

*The Vineland Adaptive Behaviour Scale*⁷: questions in this checklist are related to age appropriate self-help, locomotion, communication, occupation, socialisation and self-direction skills.

The Adaptive Behaviour Scale-Public School Version (ABS-PS): This scale is an outgrowth of a project begun in 1965 by Parsons State Hospital and the American Association on Mental Retardation to develop a measure of adaptive behaviour to be used for patients with disabilities. It was revised in 1974 by Lambert in order to use it public school children (Lambert, Mihira & Leland, 1993)⁸. Using class teacher as informant, this test measures: independent functioning, physical development, economic activity, language development, economic activity, language development, numbers and time, vocational activity, self-direction, responsibility and socialisation are included in Part I. Part II measures violent and destructive behaviour, antisocial behaviour, rebellious behaviour, withdrawal, stereotyped behaviour, odd mannerisms, inappropriate interpersonal manners, unacceptable vocal habits, unacceptable tendencies, hyperactive tendencies, psychological disturbances and medication use.

4.4.2 Remedial Measures for MR

Services for children with mental retardation begin with *early intervention programs* that focus on providing guidance for families. *Preschool programs* focus on school readiness and socialisation activities. *Regular classroom programs* for mild and moderate retardation provide individualised academic and other functional programs and interaction with nondisabled peers. *Resource room programs* are provided for remedial help to some students. *Self-contained classroom program* is provided to moderate and severely retarded children as a segregated classroom. The programs focus on age appropriate and developmentally appropriate skills.

The curriculum can be designed to meet the needs of children and should be organised around the behaviours and information needed for adequate functioning. It should also accommodate traditional subjects, such as reading, arithmetic, science, health and other subjects to facilitate proper adjustments. *Full inclusion programs* and *individualised education programs* are both used together to give better results.

Behaviour therapy programs are used to decrease disruptive and inappropriate behaviours and emotional disturbances. Behaviour modification techniques help students to attend the learning tasks, maintain attention and shape new learning behaviours.

4.4.3 Effective Teaching Strategies

- i) A teacher can use same instructional programs can be used for retarded children as used for non-retarded, but they may require more time and effort to learn.
- ii) The focus of the curriculum should be on functional tasks. For instance, functional reading may include signs for one student and sections of newspaper for another.
- iii) The teacher must have the knowledge of each student's ability so that programs could be designed to meet their individual needs.
- iv) The teacher must structure learning situation and reduce distractions.
- v) The teacher must present material clearly, sequentially and with positive reinforcement for correct responses.
- vi) In case of incorrect responses, the teacher should encourage the student to make further effort and reevaluate the program whether it is appropriate for the student.

4.5 ATTENTION DEFICIT/HYPERACTIVITY DISORDER

Attention-deficit hyperactivity disorder or ADHD is the term used to describe children whose ability to learn and profit from new experiences is impaired by their distractibility, impulsiveness, lack of concentration, restlessness, inappropriate talking and lack of regard for inappropriate situations (DSM-III-R, 1987).

ADHD children can be inattentive or hyperactive-impulsive. Following symptoms characterise a inattentive child:

- Fail to close attention to details leading to careless mistake.
- Having difficulty sustaining attention to tasks or to play activities.
- Having difficulty in listening what is being said.
- Having difficulty following through and completing homework assignments.
- Having difficulty in organising tasks.
- Avoiding tasks that require strenuous activity.
- Losing materials that are necessary for the tasks they need to complete.
- Easily distracted by extraneous activity.
- Forgetting schedules for daily activities.
- Hyperactive-impulsive children display excessive energy and are restless and agitated. They may show the following behaviours:
- Fidgets and squirms in seat
- Leaves desk or seat in the classroom at inappropriate times

Development During Early School Years (6-11 Years)

- Runs or climbs in situations when it is inappropriate
- Avoids engaging in quiet leisure activities
- Talks excessively
- Blurts out answers impulsively, often before the question has been completed
- Displays difficulty waiting in lines and taking turns
- Butts into conversations or other people's games, interrupting and intruding on others.

These symptoms must be persistent and extreme to the extent that the student cannot function adequately.

There is no agreement between professionals regarding the etiology of ADHD. It is viewed as a result of medical disorder rather than a pure behavioural problem. The neurological causes may be related to the structure of the brain, chemical imbalances, some functions of the brain or combination of these and other factors. Poor diet and poor parenting may underlie the disorder.

Following is one sequence for assessment and identification:

- Administering and collecting rating scales from relevant persons
- Orienting the family and the student to the evaluation
- Interviewing the student
- Administering standardised tests, such as IQ, achievement and continuous performance
- Conducting direct observations in several settings including school, community and home if possible.
- Interviewing the parents
- Conducting a medical evaluation
- Integrating all the data
- Giving feedback and recommendations to the team
- Programs for treatment and education of children with ADHD.

Medical management: involvement of a physician who determines whether or not medication may be effective for controlling hyperactivity.

Psychological counseling helps the student understand and cope with ADHD and the negative effects that often result even before the problem is recognised. It is most effective when the child's family is also involved.

The arrangement of the environment (classroom or school) in a manner that enhances the student's success. Teachers need to permit students to move when necessary and work where they can most effectively.

Educational planning accomplished most effectively by multidisciplinary team. Individualised education programs are designed to address the needs of the students with ADHD.

Behaviour management instruction helps the child recognise behaviours that interfere with normal functioning. Behaviour modification techniques are used to encourage and organise activities appropriate in a situation.

Self Assessment Questions

1) Write four strategies used to identify problems of students.

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2) What is the difference between inattentive and hyperactive impulsive children?

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3) What do you understand by individualised educational programs?

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4) What help can be taken from computer assisted instruction for children with various disabilities. Would you recommend it for all the students without discrimination?

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4.6 ORTHOPEDICALLY HANDICAPPED

Many muscle and bone disabilities in childhood create problems of adjustment in school and may also affect their education achievement.

Cerebral Palsy (CP) Palsy refers to the lack of muscle control and cerebral denotes brain.

Cerebral palsy is a disorder that affects movement and posture as a result of damage to those areas of brain that control movement. The brain injury, usually caused by oxygen deprivation, can occur prior to birth, during birth or soon after birth. Cerebral palsy is not a disease. It does not become progressively worse, nor is it infectious in any form. It is not hereditary. There are three types of cerebral palsy depending on which areas of are affected:

Spastic: hypertonic form, characterised by stiff, tense, and poorly coordinated movements

Athetoid: low tone form, characterised by purposeless uncontrolled involuntary movements and contorted purposeful movements.

Ataxic: characterised by balance problems, poor depth perception, and poor fine and gross motor skills.

Mixed types of symptoms can also occur.

The problems associated with poor movement and balance skills may complicate educational activities. They may also show sensory and communication problems.

Other physical ailments are brain injury, poliomyelitis, muscular dystrophy, and multiple sclerosis.

Together with regular medication and health check ups these children may also need specialised instructional help and some technical equipment to assist them. But a teacher's effective strategies will be more required as the students live a stressful life due to the ailments. A teacher should take care of the following:

- i) The teacher should be familiar to the condition of the student. The information can be obtained from the parents or the student. Without adequate knowledge of the student's condition, strategies and programs will be difficult to be planned.
- ii) Permit the use of computers, calculators, watches that have database, recorders and other equipment that will facilitate learning.
- iii) Organise the furniture and other objects in the rooms so that the students with extra equipment (wheelchair, standing board, computers etc.) can move with ease.
- iv) Pace the lessons so that the student with a physical disability can have a rest time between lessons.
- v) Ensure that the student understands the directions well.
- vi) Have the student do assignments that are necessary, if he miss the school. Do not give him extra drill and practice.
- vii) Counselor or the mental health professionals can be approached for an advice. Teacher should support the student learn and should avoid making complaints to family.

4.7 HEARING AND VISUAL IMPAIRMENTS

A small percentage of school children do not hear or see well. Some children are born blind or deaf while other sustain injuries or illness/infections that affect their vision or hearing. The detection of mild to moderate sensory impairment is challenging. It often goes unheeded and the child may be misdiagnosed as mentally retarded.

Hearing loss is much common than blindness. The most severely affected area of development for a person who is hearing impaired is the comprehension and use of oral language. Hearing impaired child will not develop language without extensive training. It is difficulty to measure such children on intellectual abilities which further makes it complicated to design an educational program for them. Five basic educational options are available to students with learning impairment:

- i) Full time placement in a regular classroom
- ii) Part time placement in a regular classroom and part time placement in a special educational classroom
- iii) Special class placement in a regular school
- iv) Separate day school placement
- v) Separate residential school placement.

Academic curriculum for the hearing impaired may be same as the hearing students. Teachers can use specific methods to teach them. But, for one reason curriculum may not be the same for such students as they might have started their formal later than the normal students. The educational approaches for hearing impaired significantly than normal hearing children. Oral / aural approaches emphasise oral language as a means to transfer information. For the students who are hard of hearing oral language is used and amplification in the form of hearing aids and other sensitive amplification devices are employed. Students are encouraged to use their voices when they speak. Manual approaches rely more exclusively on sign language and non-oral means to communicate information to students. The use of sign languages as a means of instruction is currently being preferred in all educational programs for hearing impaired. Audio-verbal training is also provided to students to make better use of their residual hearing. Many students with hearing impairments have more auditory potential than they actually use. Speech reading, cued speech, sign language, finger spelling and total communication are the approaches used. Technical devices like cochlear implants, computers and assistive communication devices will also prove greatly beneficial. Teachers after choosing appropriate methods, approaches and technical assistive devices, should keep in mind that

- i) If interpreter is used, the general lesson will be discussed with the interpreter before delivery in the class.
- ii) Face the student when speaking; don't speak when facing the blackboard.
- iii) Use videotapes and films with captioning
- iv) If using sign language, wear clothing that contrasts with you skin colour.
- v) Have a system in place for identifying cues in schools that are only conveyed by sounds, such as bells, fire alarms and intercom announcements.
- vi) Be aware of the extraneous noises in the classroom that can be distracting for the students with hearing aids.
- vii) Allow the students to move freely about the class room so that they can speech-read from other students as well as the teacher.
- viii) Make sure that the classroom is well lit with the light on your face not behind you.

The most important task for educators is to develop methods to determine which approach may be more suitable to provide the student the best educational opportunity to learn. So far, it has been observed that some students become frustrated with oral instruction while other students may develop some oral skills with this approach.

4.7.1 Visual Impairments

The blind students have severely impaired vision. They must be taught to read by Braille. Partially sighted can use magnifying glass to read print or they can use books with larger prints.

Following needs in various areas for visually impaired children have been identified:

Needs of students with visual impairments

<p>Concept Development and academic skills Maximum use of vision, determination of learning mode, academic support, listening skills, organisation and study skills,</p>	<p>Communication skills Handwriting, use of Braille writer, use of slate and stylus, use of word processors, use of adaptive equipment, note taking skills</p>
<p>Social/emotional skills Knowledge of self, knowledge of human sexuality, knowledge of others, interaction skills</p>	<p>Sensory motor skills Development of gross motor skills, fine motor skills, identification of textures tactually and underfoot, identification of kinesthetic sources, identification of olfactory sources</p>
<p>Orientation and mobility skills Development of body image, concrete environment, spatial concepts, directional concepts, traffic control, use of long cane, public interaction skills, independent travel in a variety of environments</p>	<p>Daily living skills Personal hygiene, eating, dressing, clothing care, money identification and management, use of telephone, time and calendar activities, knowledge and use of community services</p>
<p>Career and vocational skills Awareness of works people do, awareness of works that visually impaired can do, laws related to employment, work experience</p>	

4.7.2 Role of the Teachers

- i) Teachers should eliminate the clutter in the classroom so that the students can move without hurdles. Make tactile map of the classroom, school and other places so that the student will know how to easily move through the areas.
- ii) Allow the student with visual impairment to use a computer with a speech synthesizer. Braille printer may be useful for proof reading.
- iii) Teacher should learn some braille. Students do not spell words in letter to letter correspondence with English.
- iv) Other students can read assignments for visually impaired that are not available in Braille. Audio tapes can also be prepared for such assignments.
- v) Recognise that some vocabulary words mean nothing to a person who has never seen them.
- vi) If the student has some vision, use large print with lots of contrasts such as black letters on yellow paper.

4.8 GIFTED AND TALENTED CHILDREN

Lewis Terman (1925), in a classic study on the development of intelligence, followed the development of more than 1500 children who scored genius range of intelligence. From his findings and others, an agreed on definition of giftedness has evolved. Gifted children are those who demonstrate achievement or potential in any of the following areas, singly or in combination:

- i) General intellectual ability (high IQ or achievement test scores)
- ii) Specific academic aptitude (excellence in certain subject areas such as mathematics or science)

- iii) Creative or productive thinking (the ability to discover new things and find new alternatives, the ability to look at life in new ways)
- iv) Leadership ability (the ability to help solve problems)
- v) Visual or performing arts (talents in art, music, dance, drama and related disciplines)
- vi) Psychomotor ability (excellence in sports).

Gifted children come from all levels of society, all races and all ethnic groups. Gifted children process information differently than non-gifted children. Options for educating gifted children include early admission to school, acceleration and enrichment.

Some gifted children may have trouble in social adjustment and may also show emotional disturbances. They may also feel boredom with regular curriculum. High development rates may be perceived by other children as showoff.

If the talent of some gifted children is not nurtured and developed through guidance and enrichment, it will be a great loss to society as well as the individual who might have a successful and happy life otherwise.

Enrichment is an attempt to broaden a child's knowledge by a variety of methods. It refers to the attempts made by the teacher within the classroom setting to add depth, detail and challenges to the curriculum for students at a given age. Special activities may be provided like independent study with advanced text or independent small projects. To be successful enrichment activities need a purpose and specified outcomes. These activities should be well planned and organised keeping in view the talent of the student and his maturity level; otherwise these will be boring and useless to the children.

4.8.1 Role of the Teacher

- i) Teacher should readily provide resource materials like reference books and computers.
- ii) Allow students to express their interests in the subject being taught in the class
- iii) Students who have done extra research on subjects should be allowed to display it to others.
- iv) Divergent thinkers should be allowed to speak and add to the class discussion. Then guide them to find more information.
- v) Guest speakers may be called on to speak on a subject of particular interest
- vi) Praise and encourage novel ideas and ways of completing assignments
- vii) Student may be allowed to go to advanced classes, when the subject of his interest has been taught, where he had already excelled by self-study.
- viii) Arrange the reading materials in the libraries to be used by the students
- ix) Provide training to the artistic talents like music and painting or other arts.
- x) Ensure that the gifted and talented student has a firm grasp of the core material as well as the enrichment curricula.

4.9 INTEGRATION

During the past few centuries, schooling and educating the exceptional children have seen a movement of inclusion the children with problems (physical, behavioural, social, perceptual, learning or intellectual) in the same classroom and school settings with their peers. Integration is a process of providing equal opportunities to all the children by equalising and mainstreaming, thus eradicating the pain caused by exclusion. The assumption behind the integrated schooling is that of the refining instructional procedures to such a limit that they can be made suitable to each and every student's needs. Secondly, while exceptional children learn and are educated with the normal children, their needs may be fulfilled by individualised instruction programs, providing the equipments and materials as per their requirements. The teacher must be sensitive to the abilities and disabilities of children and trained to attend various problems in school children.

4.10 LET US SUM UP

In this unit, we discussed about the problems that may be faced during school years. Schooling a process of imparting knowledge, sharpening cognitive tools and shaping a person socially and emotionally. But we know that the process of learning is not the same to all the children. Some children learn slowly and some learn very fast. Both the groups on the extreme are included in the exceptional children. We discussed children with learning disabilities, visual and hearing impairments, attention and hyperactivity disorders, orthopedically handicapped children and mental retardation. Apart from these, there are children with emotional and social disturbances and language, speech and communication disorder. Gifted children represent the small group of talented children who strongly need enrichment activities so that their talents could be nurtured.

All the impairments interfere with the normal educational achievement and social adjustment. A teacher's role is important in diagnosis, and more than that, in designing individualised instructional programs. Care must be taken not to generalise and misdiagnose any condition. Schooling deals directly with the most sophisticated thing in the world, i.e., the human mind. So every activity, inch by inch, should be well planned and organised.

4.11 UNIT END QUESTIONS

- 1) What do you mean by learning disability? What are the instructional procedures used for students with learning disability?
- 2) What is cerebral palsy? What kind of instructional scheme could be followed for the student who finds it difficult to read and write?
- 3) What do you mean by mental retardation? How MR children can be integrated into a normal school? What would be specific things that a teacher should take care of?
- 4) What is ADHD? Write an essay explaining the specific programs for such children in school and in families.
- 5) How societies on the whole can be made responsible to take care of children and to provide all the children equal opportunities to grow, develop and learn?

- 6) How could inclusion programs benefit students with hearing and visually impaired children?
- 7) What kind of enrichment programs can be designed to benefit gifted and talented children?
- 8) Write short notes on the following:
 - a) Enrichment,
 - b) Integration,
 - c) Special Education

4.12 GLOSSARY

Exceptional children	: children who deviate from the average or normal child in mental characteristics, sensory abilities, neuromuscular or physical characteristics, social or emotional behaviour, in communication abilities, or in multiple handicaps to such an extent that he requires a modification of school practices or special education services, in order to develop to his maximum capacity.
Special education	: individualised educational instruction designed to meet the unique educational and related needs of students with disabilities.
Learning disability	: found in children of normal or above intelligence characterised by specific difficulties in learning to read (dyslexia), to write (dysgraphia) and to do grade appropriate mathematics (dyscalculia).
Mentally retarded	: A child who scores below 70 on a standardised IQ test and have significant difficulties adapting to his environment is considered mentally retarded.
Attention-deficit hyperactivity disorder (ADHD)	: children whose ability to learn and profit from new experiences is impaired by their distractibility, impulsiveness, lack of concentration, restlessness, inappropriate talking and lack of regard for inappropriate situations.
Enrichment	: an attempt to broaden a child's knowledge by a variety of methods. It refers to the attempts made by the teacher within the classroom setting to add depth, detail and challenges to the curriculum for students at a given age.
Integration	: a process of providing equal opportunities to all the children by equalising and mainstreaming, thus eradicating the pain caused by exclusion.

4.13 SUGGESTED READINGS

Dash, M. (2005). *Education of Exceptional Children*. New Delhi: Atlantic Publishers & Distributors.

Hallahan, D. P., Kaufman, J. M. & Lloyd, J. W. (1985). *Introduction to Learning Disabilities*. Second Edition. Englewood Cliffs NJ: Prentice Hall, Inc.

Reber, A. S. & Reber, E. (2001). *The Penguin Dictionary of Psychology*. Third Edition. Penguin Books

Skinner, C.E. (ed.) (2001). *Educational Psychology*. Fourth Edition. New Delhi: Prentice Hall of India.

A Teacher's Handbook on IED (1988), NCERT, New Delhi.

4.14 ANSWERS TO SELF ASSESSMENT QUESTIONS

SAQ 1: 1) d, 2) b, 3) c.

SAQ 2: 2) a, 3) True, True, False, False

Endnotes

¹ Kirk, S. A. (1972). *Educating Special Children* (2nd Ed.). Boston: Houghton Mifflin.

² Wechsler, D. (1993). *The Wechsler Intelligence Scale for Children-III*. San Antonio, TX: Psychological Corporation.

³ Woodcock, R. W. & Mather, N. (1989). *The Woodcock-Johnson psycho-educational Battery-revised*. Allen, TX: DLM Teaching Resources.

⁴ Brigance, A. (1983). *Brigance Diagnostic Inventory of Basic Skills*. North Billerica, MA: Curriculum Associates.

⁵ Thorndike, R. L., Hagen, E. P., Sattler, J. M. (1986). *Technical Manual: The Stanford-Binet Intelligence Scale* (4th ed.). Chicago: Riverside.

⁶ Kaufman, A. & Kaufman, N. (1983). *Kaufman Assessment Battery for Children, interpreting manual*. Circle Pine, MN: American Guidance Service.

⁷ Sparrow, S. S., Balla, D. A. & Cuccheti, D. V. (1984). *Vineland adaptive behaviour scales: Interview edition, survey form manual*. Circle Pines, MN: American Guidance Service.

⁸ Lambert, N. K., Mihira, K., & Leland, H. (1993). *Adaptive Behaviour Scale-School* (2nd ed.). Austin, TX: PRO-ED.