NETAJI SUBHAS OPEN UNIVERSITY

STUDY MATERIAL

M. Ed. Special Education
(Hearing Impairment / Intellectual Disability) - ODL

B 8 (I.D.)

IDENTIFICATION, ASSESSMENT AND NEEDS OF CHILDREN WITH INTELLECTUAL DISABILITY

M. Ed. Spl. Ed. (H.I. / I.D.)
ODL Programme

AREA - B

B 8 I.D. : IDENTIFICATION, ASSESSMENT AND NEEDS OF CHILDREN WITH INTELLECTUAL DISABILITY

A COLLABORATIVE PROGRAMME OF
NETAJI SUBHAS OPEN UNIVERSITY
AND
REHABILITATION COUNCIL OF INDIA

AREA - B
DISABILITY SPECIALIZATION
COURSE CODE - B 8 (I.D.)
IDENTIFICATION, ASSESSMENT AND NEEDS OF CHILDREN WITH INTELLECTUAL DISABILITY

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The Self Instructional Material (SIM) is prepared keeping conformity with the M.Ed.Spl. Edn.(HI/ID) Programme as prepared and circulated by the Rehabilitation Council of India, New Delhi and adopted by NSOU on and from the 2020-2022 academic session.

Mohan Kumar Chattopadhyay
Registrar

Prologue

I am delighted to write this foreword for the Self Learning Materials (SLM) of M Ed in Special Education (ODL). The M Ed in Special Education in ODL mode is a new academic program to be introduced at this University as per NOC issued by the Rehabilitation Council of India, New Delhi and subject to approval of the program by the DEB-UGC.

I must admire the emulation taken by the colleagues from School of Education (SoE) of NSOU for developing the Course Structure, Unit wise details of contents, identifying the Content Writers, distribution of job of content writing, editing of the contents by the senior subject experts, making DTP work and also developing E-SLMs of all the 16 Papers of the M.Ed Spl.Ed (H.I/I.D)–ODL program. I also extend my sincere thanks to each of the Content Writers and Editors for making it possible to prepare all the SLMs as necessary for the program. All of them helped the University enormously. My colleagues in SoE fulfilled a tremendous task of doing all the activities related to preparation of M.Ed in Spl Edn SLMs in war footing within the given time line.

The conceptual gamut of Education and Special Education has been extended to a broad spectrum. Helen Keller has rightly discerned that *"Have you ever been at sea in a dense fog, when it seemed as if a tangible white darkness shut you in and the great ship, tense and anxious, groped her way toward the shore with plummet and sounding-line, and you waited with beating heart for something to happen? I was like that ship before my education began, only I was without compass or sounding line, and no way of knowing how near the harbour was. "Light! Give me light!" was the wordless cry of my soul, and the light of love shone on me in that very hour."* So education is the only tool to empower people to encounter his/her challenges and come over being champion. Thus the professional Teacher Education program in Special Education can only groom the personnel as required to run such academic institutions which cater to the needs of the discipline.

I am hopeful that the SLMs as developed by the eminent subject experts, from the national as well as local pools, will be of much help to the learners. Hope that the learners of the M.Ed Spl Edn program will take advantage of using the SLMs and make most out of it to fulfil their academic goal. However, any suggestion for further improvement of the SLMs is most welcome.

Professor (Dr.) Subha Sankar Sarkar
Vice-Chancellor, NSOU

First Edition : December, 2019

Printed in accordance with the regulations of the Distance Education Bureau,
University Grants Commission, Government of India

AREA - B

B 8: IDENTIFICATION, ASSESSMENT AND NEEDS OF CHILDREN WITH INTELLECTUAL DISABILITY

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B 8 I.D.: IDENTIFICATION, ASSESSMENT AND NEEDS OF CHILDREN WITH INTELLECTUAL DISABILITY

B 8: ID ❐ IDENTIFICATION, ASSESSMENT AND NEEDS OF CHILDREN WITH INTELLECTUAL DISABILITY

Unit 1 ◘ Overview of Intellectual Disability

Structure :

1.1 Introduction

Intellectual Disability (**ID**), also known as M**ental Retardation** (**MR**),is a generalized neurodevelopmental disorder characterized by significantly impaired Intellectual and Adaptive Functioning. It is defined by an IQ under 70, in addition to deficits in two or more adaptive behaviours that affect every day general living (Wikipedia, 2019). Previously the definition of ID was only focused on individual's impairment on Cognitive ability. Now it includes impairment in both Cognitive functioning and Functional skills in their everyday life (Adaptive skills). (Chavan& Rozatkar, 2016)

Intellectual Disability (ID) is characterized by significant impairment in cognitive and adaptive behaviour. The term used to describe this condition has gone under constant change over the years due to social and political compulsions. The main reason to search for a new term is to find a least stigmatizing terminology. Thus, mental retardation, which was in use world over till late 20th century, has now been replaced withIntellectual Disability (ID) in most of the countries. Diagnostic and Statistical Manual 5th Revision (DSM-V) has replaced it with Intellectual Disability (ID). Current approaches view ID from a developmental perspective and rely on both intellectual abilities and adaptive functioning. The **11th revision of International Classification of Disease** (**ICD-11)** has proposed to change the term "**Mental Retardation**" to "Disorders of **Intellectual Development" (DID).** The **ICD-11** conceptualizes ID as a health condition or a disorder rather than merely a **disability**. (Girimaji & Pradeep, 2018)

Intellectual Disability (ID) is an abnormality that hasenormous social effects; it not only affects the peoplewho suffer from it but also the family and society as agroup. Millions of people worldwide have Intellectual Disability and prevalence is calculated to be 1 to 3% in developed countries.

1.2 Objectives

After completion of this unit, learners will be able to

- Understand the concept and definition of Intellectual Disability
- Know the etiological factors of Intellectual Disability
- Describe the classification of Intellectual Disability
- Explain the characteristics of Intellectual Disability
- Understand Associated Conditions withIntellectual Disability i.e Cerebral palsy, Autism, Sensory impairments, ADD, ADHD and Epilepsy.

1.3 Definition, Historical Review, Prevalence of Intellectual Disability

1.3.1 Definition of Intellectual Disability

Historically Intellectual Disability (ID) has been included in the International Classification of Disease and related Health Problems (ICD)and Diagnostic and

Statistical Manual of Mental Disorders (DSM) from the beginning. There has been a significant change in the terminology, placement of the condition, classification, and defining features as a result of advances in unravelling the development and functionality of the brain and identifying the etiologic basis of intellectual disability. Current approaches view ID from a developmental perspective and rely on both intellectual abilities and adaptive functioning.

Internationally the definition of Mental Retardation has moved away from medicalModel to Rehabilitative Model. Current trend is to describe the condition by using Functional and Educational terms rather than clinical terms.

Definitions asevolvedwerechronologically discussed here to demonstrate the variations in describing condition of Mental Retardation/ Intellectual Disability. (Chavan and Rozatkar, 2016)

a. Definition of Mental Retardationaccording to American Association of Mental Retardation(AAMR), 1983:

As per American Association on Mental Deficiency, also previously known asAmerican Association on Mental Retardation –"Mental Retardation refers to asignificantly sub - average general intellectual functioning resulting in or associatedwith concurrent deficits inadaptive functioning".

b. Definition of Mental Retardation according to Persons with Disabilities Act 1995:

Mental Retardation means a condition of arrested or incomplete development ofa person, which is specially characterized by sub-normality of intelligencemanifesting before age of 18 years.

c. Definition of Mental Retardation according to American Association of Mental Retardation(AAMR) -1992:

Mental Retardation Refers to significantly sub-average intellectual functioning, existing concurrentlywith or more of the following applicable adaptive skill areas:

- Communication
- Self-care
- Home Living

- Social Skills
- Community Use
- Self-direction
- Health and Safety
- Functional Academics
- Leisure
- Work

In adopting this definition and accompanying classifications system, AAMR(1992)suggested that Mild, Moderate, Severe and Profound classification categories in previousdefinitions to be substituted with "levels" of support needed by an individual usingterm listed below:

Intermittent: Support of high or low intensity is provided as and when needed.

Characterized as episodic or short-term during life - span transitions.

Limited: Supports are provided consistently over time, but may not be extensiveat any one time. Supports may require fewer staff members and lower expensethan more intense levels of support.

Extensive: Supports are characterized by regular involvement (daily) in at least some environment (work or home) and not limited (example: Long-term support& long-term home living support).

Pervasive: High intensity supports are provided constantly, across environment, mostly and may be of life sustaining and intrusive nature. Pervasive supportstypically involve a variety of staff members.

This definition essentially restates the 1993 AAMD definition, except that itdescribes the developmental period age as 22 years, consistent with the USAfederal definitions of developmental disabilities.

d. Definition of Mental Retardation according to American Association of Mental Retardation (AAMR) – 2002:

Definition states that "Mental Retardation is a disability characterized by significantlimitations, both in intellectual functioning and in adaptive behaviour, as

expressedin conceptual, social and practical adaptive skills, the disability originating beforethe age of 18 years".

The complete and accurate understanding of Mental Retardation implies that aparticular state of functioning, which begins in childhood, having many dimensionsand affected positively by individualized supports. As a model of functioning, itincludes the context and environment within which the person functions andecological approach that reflects the interaction of the individual with theenvironment. The outcomes of interaction are with regard to independence,relationships, and societal contributions, participation in school and community andto personal well-being.

e. Definition of Mental Retardation according to American Association on Intellectual and Developmental Disabilities (AAIDD), 2010:

Currently, the term ID is being used instead of mental retardation. This transition in terminology is supported by organization like the American Association on Intellectual and Developmental Disabilities (AAIDD). According to AAIDD, 2010, Intellectual Disability was defined and explained as follows:

Intellectual Disability is a disability characterized by significant limitations in both**intellectual functioning** and in **adaptive behaviour**, which covers many everyday socialand practical skills. This disability originates **before the age of 18**.

An individual is considered to have an Intellectual Disability based on the following major criteria:

1. **Sub Average Intellectual Functioning :** It refers to general mental capacity, such as learning, reasoning, problem solving, and so on. One way to measure intellectual functioning is an IQ test. Generally, an IQ test score of around 70 or as high as 75 indicates a limitation in intellectual functioning.
2. **Significant Limitations exist in Two or More Adaptive Skill Areas :** It is the collection of conceptual, social, and practical skills that are learned and performed by people in their everyday lives.

- **Conceptual skills**—language and literacy; money, time and number concepts; and self-direction.
- **Social skills**—interpersonal skills, social responsibility, self-esteem, gullibility, social problem solving, and the ability to follow rules/obey laws and to avoid being victimized.

- **Practical skills**—activities of daily living (personal care), occupational skills, healthcare, travel/transportation, schedules/routines, safety, use of money, use of the telephone.

Standardized tests can also determine limitations in adaptive behaviour.

3. <u>The condition manifests itself before the age 18:</u>

This condition is one of several developmental disabilities-that is, there is evidence of the disability during the developmental period, which is operationalized as before the age of 18.

4. <u>Additional Considerations</u>

But in defining and assessing intellectual disability, the AAIDD stresses that additional factors must be taken into account, such as the **community environment** typical of the individual's peers and culture. Professionals should also consider **linguistic diversity** and **cultural differences** in the way people communicate, move, and behave.

Finally, assessments must also assume that limitations in individuals often coexist with strengths, and that a person's level of life functioning will improve if appropriatepersonalized supports are provided over a sustained period.

Only on the basis of such many-sided evaluations can professionals determine whether an individual has Intellectual Disability and tailor individualized support plans.

The AAIDD definition has evolved through years of effort to more clearly reflect the ever-changing perception of intellectual disabilities. Historically, definitions of Intellectual Disability were based solely on the measurement of intellect, emphasizing routine care and maintenance rather than treatment and education. In recent years, the concept of adaptive behaviour has played an increasingly important role in defining and classifying people with intellectual disabilities.

f) Definition According to Rights of Persons with Disabilities (RPwD) Act, 2016

Intellectual disability, a condition characterised by significant limitation both inintellectual functioning (reasoning, learning, problem solving) and in adaptive behaviourwhich covers a range of every day, social and practical skills, including—

(a) "specific learning disabilities" means a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or to do mathematical

calculations and includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia;

(b) "autism spectrum disorder" means a neuro-developmental condition typically appearing in the first three years of life that significantly affects a person's ability to communicate, understand relationships and relate to others, and is frequently associated with unusual or stereotypical rituals or behaviours.(Gazette Notification of RPWD Act, 2016)

g) Definition According to Draft ICD- 11

The 11th revision of International Classification of Disease (**ICD-11)** has proposed to change the term "**Mental Retardation**" to "**Disorders of Intellectual Development**" (**DID**). The **ICD-11** conceptualizes ID as a health condition or a disorder rather than merely a **disability.**

The ICD-11 conceptualizes ID as a health condition or a disorder rather than merely a disability. This gives a balanced perspective by conceptualizing ID as a disorder in ICD and as a condition leading to disability that can be evaluated under the International Classification of Functioning Disability and Health (ICF) (Girimaji &Pradeep, 2018).

The current Beta Draft of ICD-11, 2018 defines Disorders of Intellectual Development (DID)" as a group of etiologically diverse conditions originating during the developmental period characterized by significantly below average intellectual functioning and adaptive behaviour that are approximately two or more Standard Deviations (SDs) below the mean (approximately <2.3rd percentile), based on appropriately normed, individually administered standardized tests. Where appropriately normed and standardized tests are not available, diagnosis of DID require greater reliance on clinical judgment based on appropriate assessment of comparable behavioural indicators."Overall, ICD-11 has taken into consideration the various influences on brain development and their reflection in defining intellectual function and adaptive behaviour. The diagnosis is based on clinical behavioural indicators of skill attainment over different stages of developmental trail. Moving from IQ scores alone as a major criterion for diagnosis, considering the sociocultural factors and relying on adaptive skill attainment in practical, conceptual and social domains gives it better clinical utility. To conclude, ICD-11 has provided a more humanistic, developmentally informed and comprehensive bio-psychosocial viewpoint for DID (Girimaji & Pradeep, 2018).

1.3.2 Historical Review

The history of ID has passed through a very turbulent phases and can be briefly summarized under (Chavan & Rozatkar, 2016):

i) ***Pre-Industrialization Phase***: From the dawn of civilization to the beginning of industrialization period, people born with "abnormal" physiognomy were treated with fear or ridicule (and perhaps continue to do so in many societies).

ii) ***Industrialization Phase***: Although industrial revolution is associated with increasing wealth and productivity, it also brought in many ill effects. Migration to bigger cities led to development of slums, poverty, diseases, and crimes. Families started valuing those with vocational ability and started neglecting members who were not able to work. The individual who had low intelligence were left out and were labelled as feeble-minded, degrading, and stigmatizing.

iii) ***Humanitarian Approach*:**In 1846, Dr Samuel Gridley Howe from Boston persuaded Massachusetts Legislature to appoint a commission to inquire into the condition of 'idiots'. After survey and close study, he for the first time observed, "These are the proper subjects of education, they can be taught to do some kind of labour and they can be made self-sufficient". It led to many state run schools for these persons. However, these schools were a failure because Howe and his fellows (Sequin and Wilbur) were too optimistic, unrealistic in expectations as they expected to restore all 'idiots' to normal functioning.

iv) ***Demonology of the Defectives*:** The scientific developments of Darwinism, sociological approach, Mendelian theory of genetics, and Binet psychometric tests advocated, directly or indirectly that feeble minded individuals, who could be easily identified and quantified, are risk to the society. Thus, the society started thinking ways to prevent feeble mindedness from occurring and working on ways how to control those in whom it did occur. The segregation seemed to be the best method where feeble minded could be cheaply and wisely cared for along with prevention and societal protection.

v) ***Period of John F Kennedy*:** In 1963, based on recommendations of President's Panel on Mental Retardation, JF Kennedy made a speech to the Congress of United States and asked for new resources to address the needs for people with mental retardation. Soon, virtually every state launched special educational programs for these persons.

History of Special Education in India (Usha Ram, 2004)

- The concept of mental retardation was first mentioned in the *Arthava Veda.*
- A much older system of philosophy, the Sankhya, contains a statement on different types of intellectual disabilities.
- According to the *Garba Upanishad,* babies withbirth defects were 'born to parents whose minds are distressed'.
- The *Pathanjali Yoga Sutras* deal withyoga as a therapy in which mental retardation has also been taken into consideration for this therapy.
- The great physician Charaka had given various causes of mental retardation and discussed the different types and classification.
- Clear references to persons withmental retardation can be traced in the Sangam literature (200 BC–AD 200) by Erayanar and Avviayar and more recently by Thiruvalluvar.
- In the fourth century BC, Kautilya banned the use of terms insulting persons with disabilities. He employed many people with disabilities in his spy network.
- King Amarsakti had three sons, Vasusakti, Ugrasakti and Anekasakti, who were 'greater foobs' or 'supreme blockheads'. This folly caused their father's courtier, Vishnu Sharma, to devise the world's, first special education text, *Panchantantra,* around the first century BC.
- Ancient Hindu, Buddhist and Sanskrit texts treat idiocy like other birth handicaps, occuring due to sins committed as a consequence of the guilt of former crimes in an earlier incarnation. According to Manu,the Law Giver, such. persons are born idiots, dumb, blind, deaf and deformed and are all despised by the virtuous.
- *Arthasastra* mentions treatment and care given to people with disabilities at *mattas* (monasteries) and in the time of Ashoka, at the hospitals at Pataliputra. Sinhalese asylums for people withdisabilities were set-up by the fourth century in what is now Sri Lanka.
- Special education began in northern India in 1826 with Raja Kali Shanker Ghosal opening his blind asylum at Benaras. The first facility for the deaf was started in l855 at the same place.

- In 1841, there was an asylum for idiots in Madras, separate from the lunatic asylum.
- In 1918, a school was opened in Kurseong in Bengal to train 'those children who through physical and mental defects are unable to profit by the instruction given in an ordinary school'. Similar works began in Travancore in 1931 and in Chennai in 1936.
- The Government Mental Hospital, Madras, started a school for children with mental retardation in 1939.
- The first home for children with mental retardation was opened in Bombay (1941) by the Children's Aid Society.
- Mrs Vakil, in 1944, started another school in Bombay. In the fifties, eleven more centres were started in various parts of the country.
- In 1954, Mr Srinivasan began thefirst special class in a regular school at Andheri in Bombay.

1.3.3 Prevalence

The Prevalence of Intellectual Disabilities (ID) in India is not well known. India has the world's largest children population who are at higher risk of developmental disabilities.As per Disability data published in the report (2002) of National Sample Survey Organization, India has a prevalence of 10.5/1000 in ID. Urban population has slightly higher rate (11/1000) than rural.

According to Census 2011, in India, 20% of the persons with disabilities are having disability in movement, 19% are with disability in seeing, and another 19 % are with disability in hearing. 8% has multiple disabilities.Among the male with disability, 22% are having disability in movement, 18% each has disability in seeing/ in hearing while 8% of them suffered from multiple disability. In the case of the female with disability, 20% each has disability in seeing / in hearing, 18% has disability in movement and 8% of them are having multiple disability.

According to the 2011 Census, 20.3% of people with disabilities in India have movement disabilities, 18.9% have hearing impairments, and 18.8% have visual impairments. The 2011 census additionally collected data on mental disability for the first time, and found that 5.6% of Indians with disabilities fall into that category.

Intellectual Disability affects about 2–3% of the general population.Seventy-five to ninety per cent of the affected people have mild intellectual disability.About a quarter of cases are caused by a genetic disorderand about 5% of cases are inherited from a person's parents.Cases of unknown cause affect about 95 million people as of 2013. (Wikipedia, 2019)

1.4 Etiological factors of Intellectual Disability (ID)

We know that brain is the centre of the human nervous system. It is responsiblefor receiving information from the surroundings, interpreting it, and retrieving(recalling) it when required. It is because of this ability of the brain that weare able to function effectively in our environment. In the person with ID, however, the abilities of the brain are limited and impaired becauseof damage/ injury to the brain or due to limited/arrested/ abnormal developmentof the brain.

1.4.1 Biological, Environmental Factors

A child may be born with intellectual disability, or he may become so afterbirth, due to a variety of causes. Broadly speaking, the reasons for Intellectual Disability may be grouped under two main categories:

i) **Biological/genetic/chromosomal factors** and

ii) **Environmental Factors**

Approximately 70% of individuals with severe Intellectual Disability and 50% of individuals with mild Intellectual Disability have an organic or biological basis for their disorder. Some children's cognitive deficits may simply reflect the lower end of the normal IQ distribution. In such cases, functioning represents an interaction of both genetic and environmental factors. Factors such as poverty, neglect, abuse, limited stimulation and poor parent-child interactions are but a few of the psychosocial factors that have been found to be related to intellectual functioning (AAMR, 2002). Determining the cause of Intellectual Disabilities is a difficult process. An individual may be intellectual disable for a multitude of reasons, and frequently the cause is unknown. Factually, only about half of all cases of Intellectual Disabilities can a specific cause is cited. In attempting to determine possible biological causes of Intellectual Disability in an individual are illustrated in **Table 1** presented according to their time of onset: Prenatal

Onset (occurring before birth), Perinatal Onset (occurring around the birth) and Postnatal Onset (occurring after birth).

Table 1

Type	Example	Characteristics And Consideration
Prenatal Contributions		
Chromosomal Abnormality	Down Syndrome	• Most common chromosomal abnormality • Distinctive physical characteristic • Generally mild to moderate intellectual disability
	Fragile X Syndrome	• One of the leading inherited causes of intellectual disability • Predominantly affect males • Distinctive physical features • Wide variation in learning characteristics
Metabolic Disorders	Phenylketonuria (PKU)	• Inborn error of metabolism, a recessive trait • Dietary intervention initiated shortly after birth prevents occurrence of intellectual
Maternal Infections	Rubella (German measles)	• One of the leading causes of multiple impairments in children • Exposure during first trimester of pregnancy usually results in severe consequences
Environmental conditions	Fatal alcohol syndrome	• One of the leading causes of intellectual disability • Mild to moderate intellectual disability with concomitant physical deformities
PERINATAL CONTRIBUTIONS		
Gestational disorders	Low birth weight/ prematurity	• Infant at risk for serious problems at birth • Potential for learning problems as well as sensory and/or major impairments • More common in mothers living in poverty, teenage pregnancy and women engaged in substance abuse

Type	Example	Characteristics And Consideration
Neonatal Complications	Anoxia (oxygen deprivation) Birth trauma Breach presentation Prolonged delivery	• Complicating factor surrounding birth may cause intellectual disability and other developmental delays
POSTNATAL CONTRIBUTIONS		
Infection and intoxicants	Meningitis	• Viral infection causing damage to the covering of the brain-the meninges • May result from typical childhood illness such as chicken pox or mumps • Intellectual disability is a distinct possibility
	Lead poisoning	• Highly toxic substance • Infant /toddlers living in older homes in impoverished areas at risk for ingesting lead-based paint chips • Potential for causing seizures. central nervous system damage and brain damage
Environmental Factors	Malnutrition Environmental Deprivation	• Correlates, but not necessarily causes, of intellectual disability, especially instances of mild intellectual disability
	Child abuse/neglect	• Best viewed as interacting psychosocial risk factors which heighten the vulnerability of some children for learning difficulties

(Shree & Shukla, 2016)

1.4.2 Pre-Natal, Natal, Post-Natal Causes

We may classify the factors resulting in intellectual disability/ mental retardation as factors before birth (during pregnancy), during birth and after birth. (Causes and Prevention of Mental Retardation and Associated Disabilities, n.d)

Factors during Pregnancy (Pre- Natal)

The following factors may cause intellectual disability while the child is in the mother's womb:

1) Illness or Infection during Pregnancy

Certain infections like rubella (German measles), herpes syphilis and tuberculosis contracted by the mother, particularly during the first three months of pregnancy, can damage the developing brain of the foetus (the baby in the mother's womb) and cause mental retardation. Diseases like diabetes, high blood pressure, or kidney problems in the mother can also damage the child in the womb. Maternal conditions like hypothyroidism (wherein the thyroid glands of the mother do not function adequately - for instance, due to deficiency of iodine in the diet) or uncontrolled diabetics also cause mental retardation in the child.

2) Self-medication without Doctor's Advice

Drug or medicine taken by the pregnant woman can enter the blood streamof the child in her womb. Thus, while health problems during pregnancy needto be attended to, one must take only those medicines that have been prescribedby the doctor, and he must be told beforehand about the fact that the womanis pregnant. **Under no circumstances should a pregnant woman decide totake any medication on her own,** or without the doctor's advice, even if itis for fever, cold or pain.

3) Attempted Abortion

Abortions attempted by untrained ***dais*** (midwives) or quacks can prove fatalfor the foetus an3 the mother. Failed abortion can cause **injury** or damage tothe foetus, leading to mental retardation.

4) Threatened Abortion

If the mother has had a history of abortion or miscarriage, she needs to beunder medical supervision and advice throughout the entire period ofpregnancy.

5) Poor Nutrition

Lack of balanced, nutritious and adequate diet to the pregnant woman canalso cause mental retardation in the child. A pregnant woman requires extraamounts of carbohydrates, fats, proteins, vitamins and minerals in her diet, tocater to the needs of her own body as well as that of the growing foetus. Studies showed that iodine deficiency

in the mother's diet can lead tobrain damage and- mental retardation in the foetus. Conditions like anaemia,caused by iron and folic acid deficiency, and other nutritional deficienciesin the pregnant woman can also result in growth retardation and defects in thefoetus including mental retardation.

6) Alcohol or Smoking

Smoking or consuming alcohol during pregnancy can cause a variety ofdisorders, including mental retardation in the child.

7) Radiation

Exposure to radiation during pregnancy, for example, if a pregnant womangets herself X-rayed, can result in defects in the foetus, which include slowphysical growth and an underdeveloped brain, leading to mental retardation.

8) Rh Incompatibility

To understand Rh incompatibility, we need to first understand the concept of'blood group'. You must have heard statements like: "Her blood group is A+(A positive) and his blood group is O- (O negative)." Well, human bloodis divided into four groups: A, **B,** AB and O. Further, there is a blood proteincalled Rh factor. If this blood protein is present in the blood, then the bloodtype is called 'Rh positive'. If it is not, the blood type is called 'Rh negative'.Thus, Rh incompatibility is a condition which develops when the blood typeof the pregnant woman is Rh negative while that of the foetus is Rh positive, if this happens, complications can arise. While the first-born child is usuallysafe, the danger increases for each subsequent pregnancy. If the second babyis Rh positive, then the Rh incompatibility (between the blood type of themother, which is Rh negative, and the blood type of the foetus in the womb)could result in brain damage, mental retardation, damage to the heart muscles,and even death of the child. Fortunately, the harmful effects of Rhincompatibility can be prevented in most cases. It is important for the womanto know her blood group before conceiving. After the birth of an Rh positiveinfant, the Rh negative mother is given avaccine, which prevents any harmto the subsequent child due to Rh incompatibility.

9) Multiple Pregnancies (More than two babies at one time)

The most immediate risk involved with multiple births is premature delivery(children being born before 37 weeks of pregnancy). Premature babies canhave numerous health challenges like low birth weight, jaundice andneurological disorders leading to mental retardation.

10) Pollutants

Some environmental pollutants can be harmful for the developing foetusforexample, lead, mercury and a variety of chemicals. Let us take the exampleof lead. A pregnant woman can absorb lead from car exhaust, paint flakingwhich falls off the walls in old houses, and other materials used in industries,if she is working in an industrial set up. Exposure to lead is consistentlylinked to brain damage and a variety of physical defects.

11) Accidents

Accidents, such as a fall, resulting in injury to the abdomen of the pregnantwoman, can damage the growing foetus and lead to mental retardation.

12) Emotional Stress

When the woman experiences severe emotional stress during pregnancy, therisk of miscarriage, pre-maturity and low birth weight increases. Prematureand low birth weight babies can suffer from various complications, includingmental retardation.

Prevention

To have a healthy baby, the pregnant woman should:

- ❖ have regular medical check-ups
- ❖ follow medical advice
- ❖ stay away from people who have an infectious disease like measles, mumps
- ❖ and chicken pox
- ❖ not take medication without prescription
- ❖ not attempt abortion on her own or by an unqualified person
- ❖ have a nutritious and adequate diet
- ❖ be careful and avoid accidents
- ❖ stay happy

Factors During Birth (Natal)

The risk factors during birth which can lead tc mental retardation include thefollowing:

1) Premature Delivery

As you just read, premature or pre-term babies are those who are born threeweeks or more before the due date (before **37** weeks of pregnancy) – inother words, the pregnancy does not last its full term. Premature babies areat risk (in danger) for many problems; including mental retardation.

2) Difficult/ Delayed Labour and Other Birth Complications

Most women tend to have normal childbirth. However, some women have difficult childbirth and this can lead to mental retardation. If the pregnantwoman has labour pains for more than 24 hours without the baby being born;if the placenta gets separated in the mother's womb prematurely (i.e., beforethe baby is born); if the child's head has been pressed excessively duringlabour; if the size of the child's head is too big; if the umbilical cord istwined around the baby's neck; if the umbilical cord has got squeezed duringlabour, which is especially likely if the baby is in a breech position (i.e. insuch a position that the buttocks or feet will emerge first); if medicines havebeen used to hurry labour; if the baby had to be delivered by using instrumentslike forceps that were not used properly- any of these conditions can causedamage to the baby's brain and one of the consequences of this can be mentalretardation.

3) Delayed Birth Cry

We all know that the baby must cry immediately after birth. Do you knowwhy? Yes, the newborn must now breathe on his own, and it is the crying thatinitiates the breathing process (in the mother's womb the baby had beenreceiving oxygen from the mother's blood through the umbilical cord). If thebirth cry is delayed, it means that the baby could not start breathingimmediately after delivery. This results in inadequate or no supply of oxygento the brain (this situation is also referred to as 'hypoxia' or 'anoxia'). Theresult could be brain damage leading to mental retardation and/ or otherdisabilities.

4) Poor Medical Attention during Delivery

In order to avoid any complications arising out of the above mentionedsituations, it is important that the delivery be carried out under the supervisionof a doctor or a trained midwife. Adequate medical facilities must be availableat the time of delivery, so that situations of emergency can be handled.

Prevention

To prevent mental retardation occurring during birth

- ❖ have the delivery conducted at the hospital. If the delivery is conductedat home, it must be attended to by a well-trained midwife ***('dai').***
- ❖ make sure the child cries immediately after birth, as that is the firstbreathing by the child.
- ❖ immediately get medical help, if the pregnant woman has untimelyabdominal pain, or any other sign of a problem.

Factors after Birth (Post- Natal)

The major causes of concern after birth, which can lead to mental retardation,include the following:

1) Abnormal Colour of the Child (blue/ yellow)

Blue colour of the newborn baby represents lack of oxygen and yellow colourindicates jaundice. Both these conditions can cause mental retardation asthey may lead to brain damage. Thus, prompt medical attention is required inboth these conditions.

2) Low Birth Weight

Birth weight is considered to be one of the best predictors of infant survivaland healthy development', A baby whose birth weight is less than 2500 grams (two and a half kilos) is usually considered to be a 'low birth weight' baby. Premature or preterm infants, born several weeks before the due date, usually have a low birth weight. Some full term babies may also be underweight.Such infants are at risk (in danger) of having brain damage which can lead tomental retardation.

Since low birth weight babies are at risk for many problems, includinginfections and other conditions that contribute to brain damage, they need tobe under close medical supervision for some time after they are born.

3) Fits

Fits or epilepsy may lead to brain damage.

4) Very High Fever, Infection or Brain Fever

Infections such as meningitis and encephalitis can have damaging effects onthe brain leading to mental retardation. Very high fever with fits, and severediarrhoea and dehydration can also cause brain damage.

5) Accidents

Injury to the head due to a fall, accident or hitting the child on the head cancause brain damage. The signs and symptoms of head injury may developimmediately or gradually, over a period of time.

6) Unknown Causes

In some cases, mental retardation appears to have occurred due to causes notyet known.

Prevention

The following precautions must be taken after the child is born to preventmental retardation:

- If the child has low birth weight or looks abnormal or his developmentseems to be slow, do not waste time. Immediately seek doctor's advice.
- When a child develops fever, immediately bring it down by sponging thechild with a wet cloth. Get medical attention immediately.
- If the child has fits, get medical attention immediately. Do not ignorethe child or waste time with superstitious practices.
- From birth onwards, infants must receive a nourishing, nutritious andbalanced diet. The diet should include nutrients such as proteins, vitaminsand minerals. The child should be breast fed for six months or evenlonger, if possible. However, supplementary foods should be introduced from four months onwards.
- Children must be immunized against infectious diseases at therecommended ages. If the child still gets an infection, medical help mustbe sought as soon as possible to prevent the condition from becomingworse.
- See to it that small children do not roll ox7er and fall off the bed or cot.
- Do not leave them alone near staircases, etc.
- Children must never be hit on the head when being disciplined, as suchblows can cause damage. In fact, children should never be hit at all.

By and large, every couple wants to have children. Therefore, awarenessamong the public with regard to causes and prevention of mental retardationwill certainly help in

preventing birth of retarded children. Is it not true that*prevention* is *better than cure?* It is important to take all steps to preventmental retardation, because it has no cure.

1.5 Classification of Intellectual Disability - Medical, Educational, Psychological criteria for classification and issues and current practices in certification of Intellectual Disability

1.5.1 Medical Classification

Mental Retardation has been characterized according to medical symptoms andfactors. It can be classified based on the following causes and symptoms (Mental Retardation, n.d) :

1. Infection and Intoxication
2. Mental and physical problems
3. Metabolism and nutrition
4. Mental diseases
5. Unknown factors from birth
6. Genetic disorders
7. Diseases during pregnancy
8. Psychosis
9. Environmental factors
10. Other factors

1.5.2 Educational Classification

Terminology	IQ range	Educational expectation
Educable	IQ 50 to 70	• Minimum educability in the academic subjects and in reading, writing, spelling, arithmetic and so forth. • Capacity for social adjustment to a point where he can get along independently in the community.

Terminology	IQ range	Educational expectation
		• Minimum occupational adequacy to such a degree that he can later support himself partially at the adult level.
Trainable	IQ 20 to 49	• Learning self-care in activities such as eating, dressing, undressing, toileting and sleeping. • Learning to adjust in the home or neighbourhood, though not to the total community and, • Learning economic usefulness in the home or a sheltered workshop or in institution.
Custodial	IQ Below 20	• Unable to be trained in self-care, socialization or economic usefulness • Needs constant help in taking care of his/her personal needs. • Requires almost complete supervision throughout his life since he is unable to survive without help.

In the special education centres in India, the Classification based on Classroom Placement in operation is as shown below:

Level of Placement	Chronological Age	Mental Age
Pre Primary	3 - 6 years	Up to 5 years
Primary	7 - 10 years	5 - 7 years
Secondary	11 – 14 years	7 - 9 years
Pre Vocational	15-below 18 years	9+ years

1.5.3 Psychological Classification

A number of ways have been developed to classify children with Intellectual Disability during the past few decades. Intellectual Disability wasdivided into four categories

(mild, moderate, severe and profound intellectual disability) as per severity of disability (Table 2).

Table 2: Showing Classification of Intellectual Disability According to severity of disability

Level of Retardation	*IQ Range* *Stanford-Binet and Cattell Tests*	*Wechsler Scales*
Mild	52 – 67	55 – 69
Moderate	36 – 51	40 – 54
Severe	20 – 35	25 – 39
Profound	0 – 9	0 – 24

1.5.4 Classification Based on Needed Support

AAIDD uses a classification system based on the type and extent of the support that the individual requires to function in the natural settings of home and community. AAIDD recommends four levels of support:

Table 3: Showing Classification Based on Needed Support

Support Level	**Description with Examples**
Intermittent	Supports are provided on an "as needed basis." These supports may be Episodic- that is, the person does not always need assistance; or Short term, occurring during lifespan transitions (e.g., job loss or acute medical crisis). Intermittent supports may be of high or low intensity.
Limited	Supports are characterized by consistency; the time required may be limited, but the need is not intermittent. Fewer staff may be required, and costs may be lower than those associated with more intensive levels of support (examples include time-limited employment training and supports during transition from school to adulthood).

Support Level	Description with Examples
Extensive	Supports are characterized by regular involvement (e.g, daily) in at least some environments, such as work or home; supports are not time-limited (e.g., long term job and home-living support will be necessary).
Pervasive	Supports must be constant and of high intensity. They have to be provided across multiple environments and may be life-sustaining in nature. Pervasive supports typically involve more staff and are more intrusive than extensive or time-limited supports.

Source: https://ndpublisher.in/admin/issues/lcv7n1b.pdf

The AAIDD's emphasis on classifying people with Intellectual Disabilities on the basis of needed support is an important departure from the more restrictive perspectives of the traditional approaches. Supports may be described not only in terms of the level of assistance needed, but also by type-that is, as formal or natural support systems.

1.5.5 Current Practices in Certification of Intellectual Disability

The disability certificate and/ or Identity card is the basic document that a person with any disability of more than 40 per cent requires in order to avail any facilities, benefits or concessions under the available schemes. This is not required for getting admission in a school for formal education. A disability certificate is issued by a Medical Board duly constituted by the Central and the State Governments. As stated in the Chapter X (Certification of Specified Disabilities) of RPwD Act, 2016, any person with specified disability, may apply, in such manner as may be prescribed by the Central Government, to a certifying authority having jurisdiction, for issuing of a certificate of disability. This certificate of disability issued under this section shall be valid across the country.

Certification of Intellectual Disability according to the recently published Gazette Notification on 4th January, 2018, by the Department of Empowerment of Persons with Disabilities (Divyangjan), Ministry of Social Justice and Empowerment, Govt. of India, Guidelines for Evaluation and Procedure for Certification of Various Specified Disabilities (2018), is given below:

IV. INTELLECTUAL DISABILITY

2 l. Intellectual Disability21.1. Definition - Intellectual Disability, a condition characterized by significant limitation both in intellectual functioning (reasoning, learning, problem solving) and in adaptive behaviour which covers a range of every day, social and practical skills.

21.2. Screening: Many of these children arc on follow-up with pediatricians as developmental delay. Hence, they can be assessed by pediatricians and screened toir associated co-morbidities, viz. hearing/vision/locomotor impairments/epilepsy. Then these children are referred for detailed assessment.

21.3. Diagnosis: The screened children will he referred fo Child/clinical psychologists for Adaptive functioning and **lQ** testing. The tools that con be used for the same include:

(i) Adaptive functioning: VSMS-

(ii) IQ testing: BKT/ MlSIC

Based on the above the diagnosis of ID will be confirmed. Based on adaptive functioning assessment, severity scoring will ‘be dune and disability fur JD charted,

21.4. Disability calculation: The disability calculation will be done based on VSMS score, The following will be used for disability calculation:

(i) VSMS score 0-20: Profound Disability-100%

(ii) VSMS score 21-35: Severe Disability-90%

(iii) VSMS score 36-54: Moderate Disnbility-75%

(iv) VSMS score 55-69: Mild Disability-50%

(v) VSMS score 70-84: Borderline Disability-25%

21.5. Age for certification: The minimum age for certification win be one (01)completed year. Children above one **year** and up to the age of *5* years shall be given a diagnosis as Global Developmental Delay (GDD). Children above the age of 5 years shall be given a diagnosis and certificate as Intellectual Disability.

21.6. Medical Authority: The Medical Superintendent or Chief Medical Officer or Civil Surgeon or any other equivalent authority as notified by the State Government shall be the head of the Medical Board. The Authority shall comprise of:

(a) The Medical Superintendent or Chief Medical Officer or Civil Surgeon or any other equivalent authority as notified by the State Government

(b) Pediatrician or Pediatric Neurologist (where available)/ Psychiatrist or Physician (if age >18years)

(c) Clinical or Rehabilitation Psychologist

(d) Psychiatrist

21.7. Validity of Certificate:

(i) Temporary certificate for children less than *5* years: The certificate will be valid for maximum 3 years/ 5 years age (whichever is earlier).

(ii) For children more than 5 years: The certificate will mention a renewal age. The certificate will have to be- renewed at age of 5 years, 10 years & 18 years. The certificate issued at 18 yrs age will be valid lifelong.

1.6 Characteristics of Intellectual Disability (ID)

The general characteristics of children with Intellectual Disability are:

1. Delayed development in developmental milestones.
2. Poor language development.
3. Short attention span and poor communication.
4. Poor motor integration and coordination.
5. Poor social skill.
6. Poor memory.
7. Poor in thinking, generalization, reasoning and imagination.
8. Poor or delayed concept formation.
9. Poor in scholastic or in academics.

10. May be associated with a typical physical feature i.e. small head/ large head, small eye etc.

Children with Intellectual Disability may learn to sit up, to crawl, or to walk later thanother children, or they may learn to talk later.Both adults and children with Intellectual Disability may also exhibit some or all of the following characteristics:

- Delays in **oral language development**
- Deficits in **memory** skills
- Difficulty learning **social rules**
- Difficulty with **problem solving** skills
- Delays in the development of adaptive behaviours such as self-help or **self-care** skills
- Lack of **social inhibitors**

Characteristics of children with ID according to the severity arerepresented in the following table (Mental Retardation, n.d):

Table 4: Characteristics of Intellectual Disability (ID)

Severity	***Mild***	***Moderate***	***Severe***	***Profound***
Pre-school	Can develop social and communicative skills, minimal retardation in sensory— motor areas, often not distinguished &from those normal until late age.	Can talk or learn to communicate, poor social awareness, fine motor development. Profits from training, self-help can be managed.	Poor Motor development, speech minimal, generally unable to profit from training, self help little, no communicative skills.	Gross retardation, minimal capacity for functioning in sensory motor areas, needs regular care.
School Age 6- 20 yrs	Can learn academic skills up to approximately 6th grade level by late	Can profit from training in social and occupational skills to progress beyond 2nd	Can talk or learn to communicate, can be trained	Some motor. development present. Many respond to minimal

Severity	*Mild*	*Moderate*	*Severe*	*Profound*
	teens. Can be guided on social skills.	grade level in academic subjects, may learn to travel alone in familiar places.	in elementary skills and can profit from systematic Training	to limited training in self-help.
Adult 21yrs & above	Can usually achieve social and vocational skills adequate to minimum, self support but may need guidance and assistance when under social or economic stress.	May achieve self maintenance in unskilled, under sheltered conditions, needs supervision and guidance when under mild social or economic stress.	May contribute partially to self maintenance under complete supervision, can develop self-protection skills to a minimal useful levels in controlled environment.	Some motor and speech development may be achieved, but very- limited self care needs are achieved.

Source: (Mental Retardation, n.d)

Characteristics of people with Intellectual Disabilities that can affect their academic learning, as well as their ability to adapt to home, school, and community environments are presented under the following sub-headings (Causes and Prevention of Mental Retardation and Associated Disabilities, n.d) (Shree and Shukla, 2016):

a) General Cognition

People with Intellectual Disabilities vary physically and emotionally, as well as by personality, nature, and beliefs. Their apparent slowness in learning may be related to the delayed rate of intellectual development. When adults with Intellectual Disabilities attend to appropriate aspects of presented learning stimuli versus inappropriate aspects, their rate and amount of learning can be acceptable. If specific educational supports are implemented, few researches indicate children with Intellectual Disabilities may achieve at the same rates but overall remain behind their peers. The score of an IQ test is less important in determining the general cognition, or ability and facility in obtaining information, of a person with Intellectual Disability than the types and amount of support needed to function at specified tasks or levels.

b) Learning and Memory

The learning and memory capabilities of people with Intellectual Disabilities are significantly below average in comparison to peers without disabilities. People with Intellectual Disabilities develop learning sets at a slower pace than peers without disabilities, and they are deficient in relating information to new situations. Children with Intellectual Disabilities may not spontaneously use appropriate learning or memory retention strategies and may have difficulty in realizing the conditions or actions that aid learning and memory. However, these strategies can be taught. People with Intellectual Disabilities have trouble focusing on relevant stimuli in learning and in real-life situations, sometimes attending to the wrong things.

c) Attention

To acquire information, children must attend to the learning task for the required length of time and control distractions. Children with Intellectual Disabilities may have difficulty distinguishing and attending to relevant questions in both learning and social situations.

The problem is not that the student will not pay attention, but rather that the student does not understand or does not filter the information to get to the salient features.

d) Adaptive Skills

The adaptive skills of people with Intellectual Disabilities are often not comparable to those of theirs peers without disabilities. A child with Intellectual Disabilities may have difficulty in both learning and applying skills for a number of reasons, including a higher level of distractibility, inattentiveness, failure to read social cues, and impulsive behaviour.

e) Self-Regulation

The ability to rehearse a task is related to a broad concept known as self-regulation, or the ability to mediate or regulate one's own behaviour. Information-processing theorists study how a person processes information from sensory stimuli to motoric output. In information-processing theory, the learning differences in people with Intellectual Disabilities are seen as the underdevelopment of metacognitive processes. The lack or underdevelopment of these skills notably affects memory, rehearsal skills, organizational ability, and being in control of the process of learning.

f) Speech and Language

People with Intellectual Disabilities may have delayed speech, language comprehension and formulation difficulties. Language problems are generally associated with delays in language development rather than with a bizarre use of language. People with Intellectual Disabilities may show delayed functioning on pragmatic aspects of language, such as turn taking, selecting acceptable topics for conversation, knowing when to speak knowing when to be silent, and similar contextual skills. The severity of the speech and language problems is positively correlated with the cause and severity of the intellectual disabilities: the milder the intellectual disabilities, the less pervasive the language difficulty.

g) Motivation

People with Intellectual Disabilities are often described as lacking motivation, or outer-directed behaviour. Past experiences of failure and the anxiety generated by those failures may make them appear to be fewer goals directed and lacking in motivation. The result of failure is often learned helplessness. The history of failure is likely to lead to dependence on external sources of reinforcement or reward rather than on internal sources of reward. They are less likely to self-starters motivated by self-approval.

h) Academic Achievement

The cognitive inefficiencies of children with mild to moderate Intellectual Disabilities lead to persistent problems in academic achievement. Children with Intellectual Disabilities may be able to learn basic computations, but may be unable to apply concepts appropriately in a problem-solving situation. A growing body of research has indicated that children with moderate or severe Intellectual Disabilities can be taught academics as a means to gain information, participate in social settings, increase their orientation and mobility, and make choices.

i) Physical characteristics

Children with Intellectual Disabilities with differing biological aetiologies, may exhibit coexisting problems, such as physical, motor, orthopaedic, visual and auditory impairments, and health problems. The majority of children with severe and profound Intellectual Disabilities have multiple disabilities that affect nearly every aspect of intellectual and physical development.

1.7 Intellectual Disability and Associated Conditions – Cerebral palsy, Autism, Sensory impairments, ADD, ADHD, Epilepsy

Limitation of mental abilities leading to lowered intellectual Functioning,lack of adaptive skills and delay in achieving milestones **of**development arethe main characteristics of persons with ID. **Some of thesepersons may also have additional disabilities, which further compoundtheir difficulties.** The following are some disabilities which are commonlyassociated with Intellectual Disability (Causes and Prevention of Mental Retardation and Associated Disabilities, n.d):

1.7.1 Intellectual Disability and Associated Conditions – Cerebral Palsy

We know that delayed motor development **and** clumsy/awkward gait arecharacteristics of children with mental retardation. However, some of themhave additional physical and motor disabilities. **The common condition whichcauses motor disabilities in persons with mental retardation is CerebralPalsy. There** is a relationship between cerebral palsy and mental retardation.At least 25 percent of persons with cerebral palsy also have mental retardation.Cerebral palsy is a condition where 'the limbs and other movement relatedfunctions of the body are affected due to damage to the brain. This leads tolack of balance and coordination. Brain injury can affect one or both sidesof the body, and one or more limbs. The injury may cause the muscle tonein the affected limbs to be abnormally high, making movement difficult; orabnormally low, leading to floppy movements. In some cases, the personmay also have involuntary movements.

Thus, when the child has mental retardation with the associated disability ofcerebral palsy, the development delays are further compounded. He will needphysiotherapy, occupational therapy and speech therapy. Many such individualsneed assistive devices like adapted seats, modified spoons/pencils, walkingaids/ wheel chairs.

1.7.2 Intellectual Disability and Associated Conditions – Autism

Autism is a condition where a person has abnormal social andcommunication behaviour. It is characterised by difficulties and delays inacquiring social skills and relating with others. Children with autism do notlike to be with people or interact with them - in other words, they are notsocially responsive. Usually, they do not make eye contact and resist beinghugged or picked up. Language may be delayed or absent, which

causes seriousdifficulties in communication. Besides the serious social and languageimpairments, other symptoms include perceptual problems, such as over-reaction to light, touch -and sound; difficulties in balancing and abnormalmotor behaviour, such as rocking back and forth all the time; resistance tochange and insistence on sameness day aRer day, for example, eating onlyone type of food, following the daily routine in exactly the same way, andinability to tolerate change in furniture arrangement in the house. **About** 75**per cent of autistic individuals are mentally retarded as well.** The onsetof autism is before three years of age.

These difficulties which characterise autism, along with Intellectual Disability, naturally pose difficulties in the process of learning. Educational and therapeutic strategies which use multi-sensory input help inbringing about some progress in the child, but the pace of progress is veryslow. If the child is able to attend school along with non-disabled children,it helps in his progress.

1.7.3 Intellectual Disability and Associated Conditions – Sensory Impairment

You will find **some children with mental retardation who are visuallyimpaired and/or hearing impaired.** Thus, apart from having limitations inlearning due to Intellectual Disability, the difficulties of these children arecompounded by the fact that they are not able to make use of these sensesfor learning. If intelligence is not affected and only the sense of vision/ hearing is affected, then one can acquire compensatory skills: by using othersenses. For example, non-retarded visually impaired persons tend to developtheir other senses to function in day-to-day life and thus compensate for thelack of vision. For a retarded person, this becomes difficult to do on his own.Therefore, the training has to involve considerable amount of tactile (touch)training and use of the remaining senses, in case of those with visual impairment along with mental retardation. For the child with mental retardationand hearing disability, the training has to focus on helping him acquirealternative communication strategies. The training goals for individuals withmental retardation, who also suffer from visual and/ or hearing impairmentshould be helping them achieve independence in personal skills, mobility andcommunication. Routine and repetitive vocational activities are also foundbeneficial as these will help the person to learn **and** also develop his confidenceand self-esteem. The educational programme will vary from child to child,based on the type and extent of difficulties experienced. Before beginning togive training, get professional guidance, as some individuals can benefit fromlow vision aids and/ or hearing aids and adaptive devices.

1.7.4 Intellectual Disability and Associated Conditions – ADD and ADHD

Some children with mental retardation have the associated condition ofhyperactivity. **Hyperactive behaviour refers to a group of characteristics.The most striking characteristic is that the childis constantly on themove or is fidgety** - he is not able to stay at one place to complete anactivity. The related characteristics are that he is **easily distractible,impulsive, is unable to concentrate, wanders around, talks excessivelyand has difficulty in participating in 'quiet activities (such as reading).**Hyperactivity is not easily defined because it often depends on the toleranceof the observer. Behaviour that seems excessive (hyperactive) to one observermay not seem excessive to another. However, certain children when comparedto others are clearly far more active and this can become problematic as itis likely to interfere with their school work and ability to make friends. Theirinability to sic still makes them a target for bullying, and that makes it harderfor them to relate with other children. Also, they are likely to be punishedmore often for their behaviour.By structuring the schedule of activities, and sometimes through medication this problem can be reduced.

1.7.5 Intellectual Disability and Associated Conditions – Epilepsy

A large number of persons with mental retardation have epileptic fits.However, remember that the converse is not true - all those who haveepileptic fits are not mentally retarded. How are these fits caused? Well,our brain receives and sends messages to the various parts of the body in theform of electrical signals. Problems in these electrical signals disturb the usual functioning of the nervous system and result in seizures or fits. Thesemay range from mild absence seizures (that is, momentary unconsciousness)to full blown fits where the person falls to the ground; the body becomesrigid and jerks. There may also be frothing in the mouth, and sometimes,urination. The nature of the seizures depends upon the part of the brain thatis affected. The epileptic fit or seizure may last several seconds to severalminutes.**Medical treatment is essential for epilepsy.** Through medication, epilepsycan be controlled. Some people may not have an epileptic fit for many years.However, even if epileptic fits have not occurred for some time, it should beremembered that the medicines should not be stopped unless advised by thedoctor. The medicines should be given exactly at the time prescribed by thedoctor, and in the exact dosage.Further, one must help the child/person to accept the condition and help himto live at ease. He should be taught to recognize the sensations which precedea seizure. Once he is able to do so, ask him to move to a safe place or sitdown when he experiences the sensations, so that he does not injure himself when he has a fit.

1.8 Let Us Sum Up

- The concept and definition of Intellectual Disability as per AAMR, AAIDD and Draft beta version of ICD- 11.
- History of Intellectual Disability: Different Phases viz. ***Pre-Industrialization Phase, Industrialization Phase, Humanitarian Approach, Demonology of the Defectives and Period of John F Kennedy.***
- Etiological factors of Intellectual Disability: Biological and Environmental Factors
- Classification of Intellectual Disability: Medical, Educational, Psychological and Based on Needed Support.
- Current Practices in Certification of Intellectual Disability as per the Guidelines for Evaluation and Procedure for Certification of Various Specified Disabilities, 2018.
- Characteristics of Intellectual Disability.
- Associated Conditions with Intellectual Disability i.e Cerebral Palsy, Autism, Sensory impairments, ADD, ADHD and Epilepsy.

1.9 Unit End Exercises

1) Define Intellectual Disability.
2) Discuss historical perspective of Intellectual Disability.
3) Elucidate the Certification Procedure of Intellectual Disability in India.
4) Explain the Types and characteristics of children with Intellectual Disability.
5) Discuss the etiological factors associated with Intellectual Disability.

1.10 References

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Unit-2 □ Screening, Identification, Assessment and Diagnosis

Structure

2.1 Introduction :

To qualify for special education, a child must be diagnosed as having a disability and the disability must be found to "adversely affect educational performance" so as to

require special services. There is wide variability in the way students are referred and evaluated for special education. For children with severe disabilities, the physician and parents identify and refer the child to special education. Other disabilities or deficits in the child's developing physical and cognitive abilities may be identified by teacher and parent observation or revealed by academic or developmental tests. After referral, a discussion could be held to determine whether the child should be "assessed" to determine the type of disability he or she may have. Assessment will attempt to identify the cognitive (academic), social, or physical tasks which the child has difficulty performing, and why the difficulty exists, i.e., what disability or disabilities are present. Assessment may include: psychological or intelligence; speech and language; vision and hearing; bheavioural or an examination by a doctor. Assessment not only gives us the direction to choose goals under a particular programme but also during the progrmme it is necessary to monitor its efficacy. Therefore it is understood that assessments are done to identify and diagnosis a condition, plan programme, make referral, utilize existing special educations provisions. Keeping these in mind this chapter is going to discussion the various approaches, types, tools of assessments and its implementation in overall planning of the child with disability.

2.2 Objectives

After going through this unit the reader should be able to:

- Discuss the role of screening in assessment and the tools for screening and early identification
- Demonstrate the understanding of meaning, definition, purposes of assessment
- Demonstrate the understanding of the various approaches and types of assessment
- Justify the need for assessment of social behaviours, general behaviours, and language and its importance in intellectual disability.
- Explain the different methods and tools for the assessment of child development, intelligence, behaviours, language and speech and educational.
- Explain the rationale and relative merits of CRTs
- Explain the procedure for construction of a CRT
- Apply the various methods of assessment in their practical work.

2.3 Introduction to existing screening, identification and assessment/techniques trends in the field of intellectual disability

DEFINITION OF SCREENING

Screening is assessing a whole population in order to identify those individuals for whom some intervention in development would be beneficial.

An obvious medical example is the process of screening all neonates for a metabolic disorder such as phenylketonuria. A simple urine test is carried out, enabling a dietary treatment program to be instituted for babies found to be suffering from the condition.

SCREENING PROCESS AND PROCEDURES

Frankenberg as quoted by Naismith and Smith suggests seven points to be kept in mind prior to screening

- Seriousness of the condition.
- Availability of effective treatment.
- The frequency of the condition being screened for.
- Timing of screening.
- Delectability of the condition.
- Value of early detection.
- Cost effectiveness.

PRENATAL SCREENING AND DIAGNOSTIC PROCEDURES

Blood tests in the mothers:-

- Hemoglobin levels (Hb%) to defect anemia
- Blood glucose levels to detect Diabetes Blood VDRL to detect Syphilis.
- Blood antibody tries to detect specific infection.
- Blood group and Rh typing for blood group incompatibilities.
- Alpha foeto proteins to detect neural tube defects in the foetus.

Ultrasonography (During pregnancy) :-

Many types of fetal pathology including those associated with Intellectual Disability later on can be identified during the II trimester of pregnancy by means of ultrasound technique. Some of them are neural tube defects, Hydrocephaly, microcephaly, etc.

Amniocentesis:-

Amniocentesis is a process which involves drawing of amniotic fluid through per abdominal route.Amniocentesis is indicated in fetal chromosomal aberrations, congenital metabolic errors and open neural tube defects and severe Rh incompatibility.

It is also conducted in advanced maternal age, previous birth of an abnormal child or a mentally retarded child. By diagnosing conditions early during gestation, the option of termination of pregnancy is available to the mother in abnormal cases. Thus amniocentesis is a technique for early identification and primary prevention.

Fetoscopy :-

It is carried out during II trimester of pregnancy through trans abdominal route. By using fiber optic device the fetus is visualized for its external features and for collecting samples of blood and tissues from the fetus. The procedure helps in diagnosing certain physical anomalies, metabolic disorders or biochemical abnormalities

Chronion villous sampling :-

Biopsy of chronic villous is performed either trans-abdominally or per-vaginally. The sample is then subjected in karyotyping and enzyme determination. There are hazards involved in this procedure in inexperienced hands.

Group B strep Screening:-

Group B – streptococcus (GBS) is a type of bacteria that can cause serious infections in pregnant women and newborn. GBC is often found in the mouth and throat, lower-intestinal tract and vagina of healthy women. It can be very harmful to a new born baby who does not yet have a rebuts immune system.

POSTNATAL SCREENING AND DIAGNOSTIC PROCEDURES

- Apgar score.
- Urine screening for metabolic errors – ex. PKU

- Blood biochemistry tests for cretinism, Rickets, Jaundice etc.
- Blood antibody titers to detect infections.
- Chromosomal analysis for Down Syndrome, deletion syndromes etc.
- Neonatal neuron behavioral assessments.
- EEG electroencephalogram for seizure disorder.
- Visual screening for visual impairments (visual acuity, funds examination, Retinoscopy etc.)
- Auditory screening – for hearing impairments (Tympanogram BERA etc.)
- Ultra Sonogram.
- CT scan (computerized tomography)
- MRI (Magnetic Resonance Imagine) for intracranial pathology and structural abnormalities.

APGAR Score:

Apgar has devised a method of scoring which is of practical value. The score is a more accurate index of likelihood of death or neurological residue if it is taken at 5 minutes. At one minute after delivery it is an index of asphyxia and the need for assisted ventilation.

Apgar stands for "**A**ppearance, **P**ulse, **G**rimace, **A**ctivity, and **R**espiration."

In the test, five things are used to check a baby's health. Each is scored on a scale of 0 to 2, with 2 being the best score:

1. **A**ppearance (skin color)
2. **P**ulse (heart rate)
3. **G**rimace response (reflexes)
4. **A**ctivity (muscle tone)
5. **R**espiration (breathing rate and effort)

Apgar Scoring

Apgar Sign	2	1	0
Appearance (skin color)	Normal color all over (hands and feet are pink)	Normal color (but hands and feet are bluish)	Bluish-gray or pale all over
Pulse (heart rate)	Normal (above 100 beats per minute)	Below 100 beats per minute	Absent(no pulse)
Grimace ("reflex irritability")	Pulls away, sneezes, coughs, or cries with stimulation	Facial movement only (grimace) with stimulation	Absent (no response to stimulation)
Activity (muscle tone)	Active, spontaneous movement	Arms and legs flexed with little movement	No movement, "floppy" tone
Respiration (breathing rate and effort)	Normal rate and effort, good cry	Slow or irregular breathing, weak cry	Absent (no breathing)

A baby who scores a 7 or above on the test is considered in good health. A lower score does not mean that your baby is unhealthy. It means that your baby may need some immediate medical care, such as suctioning of the airways or oxygen to help him or her breathe better. Perfectly healthy babies sometimes have a lower-than-usual score, especially in the first few minutes after birth.

A slightly low score (especially at 1 minute) is common, especially in babies born:

- after a high-risk pregnancy
- through a C-section
- after a complicated labor and delivery
- prematurely

At 5 minutes after birth, the test is given again. If a baby's score was low at first and hasn't improved, or there are other concerns, the doctors and nurses will continue any necessary medical care. The baby will be monitored closely.

Ultra-Sound Examination:-

For intracranial pathology real time ultrasound examination of the intracranial contents of neonates and infants is a valuable new technique. Real time ultrasound examination of the head can reveal intracranial hemorrhage in the new born.

Biochemical tests in neonatal screening : -

Blood and urine examinations are conducted in the neonatal period for identifying metabolic disorders. It is not done as a routine examination but in all suspected cases and with previous history of Intellectual Disability in the family. Cretinism is another condition which can be diagnosed in the neonatal period and necessary treatment given.

EEG – electro encephalography :-

EEG has an important role in the evaluation of neurologically compromised new born infants. It is a simple method to study the rapidly maturing neonatal brain and detect the deviations from anticipated norms sleep pattern are well developed in normal newborn and they indicated degree of brain maturity. Absence of these in EEG is abnormal. The stresses and strain undergone by the neonate brain are also reflected in EEGs.

Incidence of abnormal EEG's is higher in cases of Intellectual Disability associated with epilepsy, encephalitis, severe degree of MR and brain damage sustained before birth or in the neonatal period

CT-Computed Tomography:-

CT of the brain defines intracranial anatomy by visualizing structures of different radio densities.

There are many abnormalities which can be detected by CT scan of the CNS such as anoxia of tissue, intracranial hemorrhage, hydrocephalous and congenital anomalies like agenesis of corpus callosum.

MRI (Magnetic Resonance Imagine) : -

It is a new imagine technique used for display of brain anatomy. It uses radio frequency radiation in the presence of a magnetic field along with computation of data. It appears to be a superior procedure to many present techniques.

Blood spot screening:-

About a week after baby is born, the midwife will ask to take a sample of blood from baby's heel to test for rare but serious conditions, such as Sickle cell disease, Cystic fibrosis.

Physical examination:-

Here will be offered two full physical examinations for the newborn baby. The first one is will take place within 72 hours of the birth. The second will be carried out when the baby is six to eight week old.

Hearing screening:-

Newborn babies are also offered hearing screening tests to check for any hearing loss. The earlier any hearing loss can be identified. The better, as any loss could affect a baby or childs development. If a problem is found, support and information can then be provided for the woman and her baby.

2.3.2 Assessment:

Assessment in special education is the process used to determine a student's specific learning strengths and needs and to determine whether or not that student is eligible for special education services. It is a process that involves collecting information about the student for the purpose of making decisions. Assessment can be seen as a problem-solving process (Swanson & Watson, 1989) that involves many ways of collecting information about the student. According to Gearheart and Gearheart (1990, p. 3) assessment is "a process that involves the systematic **collection** and interpretation of a wide variety of information on which to base instructional**/intervention** decisions and, when appropriate, classification and placement decisions. Assessment is primarily a problem-solving process" (cited in Pierangelo and Giuliani, 2006b,).

Importance of Assessment

The importance of assessment should never be underestimated. The decisions made about a student during this process can affect him for the rest of his life. Ultimately, these decisions are critical in meeting the needs of his present and future educational situations. In working with students in special education; you will work with many professionals from different fields. You are part of a team, often referred to as a **multidisciplinary team** that tries to determine what, if any, disability is present in a student. The team's role is crucial because it helps determine the extent and direction of a student's personal journey through the special education experience (Pierangelo &Giuliani, 2006a). Consequently, the skills you must possess in order to offer a student the most global, accurate, and practical evaluation should be fully understood. The

development of these skills should include a good working knowledge of the following components of the assessment process in order to determine the presence of a suspected disability:

- Collection. The process of tracing and gathering information from the many sources of background information on a student, such as school records, observation, parent intakes, and teacher reports
- Analysis. The processing and understanding of patterns in a student's educational, social, developmental, environmental, medical, and emotional histories
- Evaluation. The evaluation of a student's academic, intellectual, psychological, emotional, perceptual, language, cognitive, and medical development in order to determine areas of strength and weakness
- Determination. The determination of the presence of a suspected disability and the knowledge of the criteria that constitute each category
- Recommendation. The recommendations concerning educational placement and program that need to be made to the school, teachers, and parents or guardians.

Purpose of Assessment

Assessment in educational settings serves five purposes (Pierangelo & Giuliani, 2006b):

1. **Screening and Identification**: To screen students and identify those who may be experiencing delays or learning problems
2. **Eligibility and Diagnosis:** To determine whether a student has a disability and is eligible for special education services, and, if so, to diagnose the specific nature of the student's problems or disability
3. **IEP Development and Placement:** To provide detailed information so that an **individualized educational program** (IEP) may be developed. Understanding Assessment in the Special Education Process and appropriate decisions made about the student's educational placement
4. **Instructional Planning.** To develop and plan instruction appropriate to the student's special needs
5. **Evaluation.** To evaluate student progress

The Difference between Testing and Assessment

Many times, teachers will say, "I'm concerned about my student. She needs to be tested." In actuality, this is not the appropriate language to use. There is sometimes confusion between the terms "testing" and "assessment." While they are related, they are not synonymous. Testing is the administration of specifically designed and often standardized educational and psychological measures of behavior. Testingis a part, but just one part, of the assessment process. Assessment encompasses many different methods of evaluation, one of which is testing.

2.3.3 Conceptual issues related to intellectual disability among different diagnostic systems:

Intellectual Disability is a developmental disorder and is associated with significant limitations in intellectual functioning and adaptive behaviors. Currently, it is widely referred to as "intellectual disability (ID)" and "intellectual developmental disorders (IDDs)." In India, the Rights of Persons with Disabilities Act (2016) has introduced the term "intellectual disability" in the place of "Intellectual Disability." However, India being a signatory country to the World Health Organization (WHO), where the International Classification of Diseases, 10th revision (ICD 10) guidelines are adopted in the clinical practice, the term "Intellectual Disability" is still in clinical use (The WHO Working Group on the Classification of Intellectual Disabilities has recommended replacing the term "Intellectual Disability" with "IDD" in ICD 11 Salvador Carulla *et al*., 2011]. Thus, both the terms, intellectual disability and Intellectual Disability, are in use in India. Despite variation in the terminology and the differences in the criteria for diagnosis (e.g., ICD 10; Diagnostic and Statistical Manual of Mental Disorders, 5th Edition [DSM 5]) and assessment of disability (as notified in the guidelines in January 2018, which are based on the RPD Act), it is commonly agreed that significant impairments in intellectual functioning and adaptive behavior during the developmental period is the hallmark of the condition.

It is estimated that nearly 2.5% of the global population will have low levels of intellectual functioning commensurate with ID. However, a wide variation in point prevalence of ID has been reported in India, from around 1/1000 to32/1000, depending on the case definition, methodology, and population selected. An important point that can be noted in the literature is that prevalence rates vary depending on whether deficits

in either intellectual functioning or adaptive behavior or both are considered. Although ID is recognizable in infancy or early childhood, it is often difficult to accurately diagnose it before 5 years of age. Hence, global developmental delay (GDD), which often predicts future development of ID, is used as a surrogate marker in children between the age group of 3 months and 5 years. Shevell *et al*. (2008) defined GDD as evidence of significant delay in two or more of the following developmental domains: gross/fine motor, speech/language, social/personal, cognition, and activities of daily living. However, not all cases of GDD may have cognitive deficits or end up as ID. Males are diagnosed with ID 30% more than females, especially in the milder ID range. However, this difference seems to disappear when the ID is more severe.ID is also associated with high morbidity and extreme costs of care. ID can cause significant impact on the individual, families, health care system, and state.

Terminology and conceptual issues related to intellectual disability among different diagnostic systems

System	Term	Definition	Intellectual functioning	Adaptive Behavior	Developmental Period
ICD□10	Mental retardation	or incomplete development of the mind, which isespecially characterized by impairment of skills manifested during the developmental period, which contribute to theoverall level of intelligence, i.e., cognitive, language, motor, and social abilities	Components are cognition, language, and motor and social skills An intelligence quotient of 70 is the cutoff It categorizes ID into four severity levels that are based on IQ	Not clearly defined It is implied that assessment of adaptive behavior is part of assessment of intellectual functioning	Not explicitly defined, but understood to consider it as 18 years

System	Term	Definition	Intellectual functioning	Adaptive Behavior	Developmental Period
DSM□5b	Intellectual disability (intellectual developmental disorder)	(intellectual developmental disorder) is a disorder with onset during the developmental period that includes intellectual and adaptive functioning deficits in conceptual, social, and practical domains	Components are reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience On standardized tests of intelligence, score of 65□75 is considered to indicate intellectual disability; where the test quotients have standard deviation of 15 and mean of 100 and standard error of 5	result in failure to meet developmental and socio-cultural standards for personal independence and social responsibility Without ongoing support, the deficits will affect one or moreactivities of daily life, such as communication, social participa-tion, and indep-endent living acrossmultiple environments Nomenclature of severity levels is same as it is in ICD 10, but the levels are decided basedon the deficits only in adaptive functioning DSM 5 has explained the adaptive behaviors in each of the three domains of intellectual functioning such as conceptual, social, and practical domains in reference to theseverity level and age	Defined as 18 years

System	Term	Definition	Intellectual functioning	Adaptive Behavior	Developmental Period
Rights of Persons with Disabili-ties Act, 2016c	Intellectual disability	Intellectual disability, acondition characterized by significant limitation both in intellectual functioning (reasoning, learning, and problem solving) and in adaptive behavior which covers a range of day to day, social, and practical skills	Like ICD□10, it has adopted the IQ cutoff of 70 for ID,and the same terminology to denote severity levels, but with different cutoffs. The severity levels are based on the scores of the Vineland Social Maturity Scale (a standardized, normative measure adaptive behavior scale) Profound disability = 0□20 (100%) Severe = 21□35 (90%) Moderate = 36□54 (75%) Mild = 55 69 (50%) Borderline = 70 84 (25%) Note : Border line disability is not a bench mark disability	Adaptive behavior is not defined but is understood to cover a range of day□to□day, social, and practical skills Scores on Vineland Social Maturity scale (a standardized, normative measure adaptive behavior scale) are considered to define the severityof ID	Not explicitly defined,but understood to consider it as 18 years

System	Term	Definition	Intellectual functioning	Adaptive Behavior	Developmental Period
1CD□1 Working Group on Intellec-tual Disability (2011)d;	Intellectual developmental disorders characterized	A group of developmental conditions clinical severity by significant impairment of cognitive functions, which are associated with limitations of learning, adaptive behavior, and skills	The working group advocated continuing implied that levels mentioned in ICD-10 due to their diagnostic and clinical utility. Therefore, IQ score should be considered as a clinical descript or among others that are considered important in determining these verity levels of ID	Adaptive behavior is not defined but difficulties in adaptive behavior will manifest in meeting the demands of daily life expected for one's age peers, cultural, and community environment. These difficulties include limitations inrelevant conceptual, social, and practical skills	

aWorld Health Organization (1992). ICD 10 Classification of Mental and Behavioural Disorders. Geneva: World Health Organization, bAmerican Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, 5th ed.. Arlington, VA: American Psychiatric Association, cGovernment of India. Rights of Persons with Disabilities Act. New Delhi: Government of India, 2016, dSalvador Carulla L, Reed GM, Vaez Azizi LM, Cooper S A, Martinez Leal R, Bertell M,*et al*. Intellectual developmental disorders: Towards a new name, definition and framework for "Intellectual Disability/ intellectual disability" in ICD 11. World Psychiatry 2011; 10:175 180, 1Need to refer to ICD 11 final guidelines as and when they become operational. ICD 10 – International Classification of Diseases, 10th revision; DSM 5 – Diagnostic and Statistical Manual of Mental Disorders, 5th Edition; ID – Intellectual disability; IQ – Intelligence quotient

2.3.4 Diagnosing Intellectual Disability and its Co morbidities:

The diagnostic process of ID is similar to any other behavioral and mental disorders but with subtle differences. The diagnostic process involves history taking, observation including medical examination, intellectual and adaptive behavioral assessment, identification of comorbid psychiatric disorders, and need based laboratory investigations for other medical conditions. Therefore, the diagnostic process encompasses several components that are described as follows:

History taking:

The purpose of eliciting the history is to establish that there is an evidence for deficits in both intellectual functioningand adaptive behaviors that have an onset during the developmental period, to note possible etiology of ID, and to identify comorbidities and response to interventions, if any. Therefore, it requires interviewing of key people including the index patient and behavioral observation of the patient. Key people could be parents, caregivers, and service providers who know the birth and developmental history of the child. A useful and comprehensive approach to assessment would include noting chief complaints in chronological order with mode of onset, duration, and precipitating event followed by a history of presenting illness and a detailed prenatal and perinatal history as a prelude. Developmental history in greater detail, particularly related to motor, language, and communication; self help skills; socioemotional skills; cognition; and occupational skills/leisure time activities; medical comorbidities and its treatments; psychiatric history including the details of onset, evolution, and current status of behavioral and other psychopathological disturbances; and treatment history. This should be followed by a comprehensive family history including the three generation pedigree; consanguinity; family background; current living arrangements; and details of potential stressors, coping, and adaptation by the family.

Physical examination

It must involve routine systemic examination, anthropometric assessment, and observation of atypical morphological features suggestive of specific genetic disorders. Detailed physical examination helps to identify the etiology in a majority of cases, detect comorbid medical conditions, and also order appropriate investigations.

Physical examination in cases with ID consists of three parts which are as follows:

Anthropometry

This provides indication toward nutritional status and underlying medical or genetic condition. The measures should include the following: height (length in case of neonates and infants), arm span, upper segment and lower segment lengths, sitting height, weight, head circumference, chest circumference, abdominal circumference, intercanthal and interpupillary distances, and palm and foot lengths.

Dysmorphology examination

Dysmorphology is the observation, documentation, and study of birth defects as well as syndromes. A thorough head to toe examination should be carried out to identify minor physical anomalies (MPAs), which provide clues toward etiological diagnosis, especially the genetic disorders. It requires keen observation and knowledge of normal versus abnormal morphology.

Examination of major organ systems

A systematic examination of all the organ systems to rule out multiorgan involvement and comorbid medical conditions has to be performed for overall assessment and management. It is essential to be meticulous in observing and documenting the findings of physical examination as many of the MPAs can be easily missed. Hence, it may be important to take photographs or videos after informed consenting to document and revise the original findings at a later date. Some of the essential things to note are vision, hearing, locomotion (videos may help), and any major congenital anomalies. The presence of MPAs provides clues toward genetic versus non-genetic etiologies. Hence, branding every child universally with cerebral palsy which is often due to a non-genetic cause with a static course can be avoided. Presence of four or more MPAs should alert the physician toward probable genetic cause. If MPAs are encountered in a child, such a case can be referred to a dysmorphologist/medical geneticist for further evaluation (the following are excellent sources for syndromes and standard terminology and definitions of MPAs – Smith's Recognizable Patterns of Human Malformations and"Elements of Morphology" in American Journal of Medical Genetics, 2009 [available from https:/ /onlinelibrary.wiley.com/toc/15524833/149A/1]).

Further, progressive multi-organ dysfunction may be a clue toward a disorder of inborn error of metabolism which may be potentially treatable. Organ system examination is similar to any branch in medicine, and clinicians can refer to standard books like Hutchison's Clinical Methods.

Behavioral observation

The purpose of behavioral observation is to corroborate the clinical history with regard to intellectual functioning and behavioral repertoire. Therefore, it should start with observation of general appearance, any oddities in behavior, attention span, receptive and expressive speech abilities, andsocial and interpersonal abilities. Socioculturally appropriate stimuli could be presented to understand the level of general fund of knowledge, generic concepts, abstract thinking, reasoning, and problem solving abilities that are not strictly dependent on academic learning. However, clinicians may use any standard format of general mental status examination for children to complement the behavioral observation.

2.3.5 Assessment of intellectual functioning and adaptive behavior

This step is to confirm the clinical diagnosis and identify the severity level of ID. Both ICD 10 and DSM 5 recognize the need for assessing the intellectual functioning with standardized tools that yield intelligence quotients (IQs). DSM 5 restricts the use of IQ to draw a cutoff of 65–75 (IQ 70± standard error of 5) for identifying ID. Conversely, ICD 10 advocates a IQ cutoff of 70 to identify ID and different IQ ranges for categorizing four severity levels such as, mild (IQ: 50–69), moderate (IQ: 35–49), severe (IQ: 20–34), and profound (IQ <20). The ICD 11 Working Group advocated that severity levels for IDD should rely on a clinical description of the characteristics of each subcategory, but the IQ score can be considered as one of the clinical descriptors that are important in determining the severity level. Therefore, till the time ICD 11 comes into force, the ICD 10 guidelines should be followed, which rely on IQ both for identifying the condition and ascertaining the severity levels of ID. Clinicians may note that the choice of tests in the Indian context is limited notwithstanding the fact that the norms are in many cases are not revised. This is a major concern given the evidence for Flynn effect, which refers to observed rise in IQ scores over time and related norm obsolescence. Therefore, the IQ scores should not be rigidly interpreted.

When IQ tests are not applicable because of young age (e.g., children below 3 years) or associated sensory motor issues and gross understimulation, standardized developmental scales (e.g., Developmental Screening Test and Developmental Assessment Scales for Indian Infants) can be used as applicable. The developmental tests yield "developmental quotients" which are interpreted in the same way as IQ scores. With regard to the assessment of adaptive behavior, Vineland Social Maturity Scale

(VSMS) is the only standardized measure available in India at present. The VSMS yields social quotient (SQ) and a profile of eight important domains of adaptive behavior. If the administration of VSMS is not possible for any reason, clinicians can ask socio-culturally relevant questions to understand the level of adaptive behavioral functioning. If needed, DSM 5 list of specifiers for severity levels of ID could be referred to assess the adaptive behaviors till the time ICD 11 guidelines come up.

Wherever IQ and SQ indicate different severity levels of ID, decisions are taken in favor of SQ scores because the latter denotes the degree to which the index patient is able to meet the standards of culture appropriate demands of daily life. Thus, SQ reflects the severity of ID better than IQ under ordinary circumstances. However, when assessment of the severity of ID by means of the usual procedures is rendered particularly difficult or impossible by associated sensory or physical impairments and severe behavioral disturbances, the condition should be identified as "Other Intellectual Disability." If there is evidence of Intellectual Disability, but insufficient information is available to assign the patient to one of the four categories or other Intellectual Disability, it can be identified as "unspecified Intellectual Disability." In case of "Other Intellectual Disability" and "unspecified Intellectual Disability," more information on developmental skill repertoire and periodical assessments of intellectual and adaptive behavior is desirable to infer the current level of functioning and associated severity levels of ID. Test selection should be proper if the person has co morbid sensory motor impairments [Appendix 3]. Lastly, it must be recognized that the use of IQ and adaptive measures for clinical diagnosis is different from disability assessment and the latter has specific guidelines that must be strictly adhered to.

2.3.6 Confirmation of intellectual disability diagnosis

Based on the information obtained through case history, observation, and testing, ID could be coded into any of the six categories such as mild, moderate, severe, profound, other, and unspecified Intellectual Disability. The ICD 10 has provision for using a fourth character to specify the extent of the behavioral impairment if this is not due to an associated disorder (e.g., F7x. 0 to denote "no, or minimal, impairment of behavior") and an additional code from the ICD 10 should be used if the cause is known (e.g., F72 severe Intellectual Disability plus E00. [Congenital iodine deficiency syndrome]). Evidence for additional coding of etiological causes may come from laboratory findings.

According to the guidelines based on the Rights of Persons with Disabilities Act 2016 (Government of India, 2018, p. 94), disability assessment is done through three stages such as screening, diagnosis, and disability calculation [Table 4]. The minimum age for certification is one completed year. Children above 1 year and up to the age of 5 years shall be given a certificate with a diagnosis of GDD. Children above the age of 5 years shall be given a diagnosis and certificate as ID. The medical superintendent or chief medical officer or civil surgeon or any other equivalent authority as notified by the state government shall be the head of the medical board. The authority shall comprise the following: (a) the medical superintendent or chief medical officer or civil surgeon or any other equivalent authority as notified by thestate government; (b) pediatrician or pediatric neurologist (where available)/psychiatrist or physician (if age >18 years); (c) clinical or rehabilitation psychologist; and (d) psychiatrist. It is preferable that clinicians time to time refer to relevant source to be updated with the guidelines. Temporary certificate can be issued for children <5 years, which will be valid for a maximum of 3 or 5 years of age, whichever is earlier. For children aged >5 years, the certificate will mention when to renew. As per the act, the certificate will have to be renewed at the age of 5, 10, and 18 years. The certificate issued at 18 years of age will be valid lifelong.

2.4 Approaches and types of Assessment

2.4.1 Types and approaches of assessment:

Educational assessment helps to find out abilities of the student and plan teaching programme accordingly. To plan the educational programme we have to collect various data using various methods. There are various types and approaches of assessment like Norm referenced tests, Criterion reference tests, Curriculum bases assessment and teacher made tests so on. We need to know the assumptions and scope of each type of test otherwise we may tend to overuse or under use, and thus jeopardizing the very purpose of assessment. This unit is going the present the various types and approaches of assessment.

Assessment has assumed lot of importance in key areas of life, as they have the potential to provide comprehensive and systematic information about the individual along a given dimension of behavior. Assessment is done for various purposes including estimation of intelligence, profiling aptitude, behavior and specific skills and so on. Following are the types of assessment.

- Norm Reference Tests (NRT)
- Criterion Reference Tests (CRT)
- Curriculum Based Assessment (CBA)
- Teachers' Made Tests (TMT)
- Behavioural Assessment
- Ecology Based Assessment

2.4.2Norm Referenced Assessment:

Norm Referenced Assessment or Norm Referenced Testing (NRT) is the more traditional approach to assessment. These tests and measurement procedures involve test materials that are standardized on a sample population and are used to identify the test takers ability relative to others. It is also known as formal assessment.

Norm referenced assessment is defined as a procedure for collecting data using a device that has been standardized on a large sample population for a specific purpose. Every standardized assessment instrument will have certain directions that must be followed. These direction specify the procedure for administering the test and ways to analyze and interpret the results and reporting them. Examples of the more commonly known formal assessment devices are the Wechsler Intelligence Scales for children – Revised (WISC-R), The Illinois Test of Psycholinguistic Ability (ITPA), The Stanford-Binet Intelligence Test and the Peabody Picture Vocabulary Test – Revised (PPVT-R) and Peabody Individual Achievement Test (PIAT).

Advantages of norm-referenced assessment:

Norm referenced tests are widely used in special and remedial education for many reasons.

- The decision of categorizing the children as exceptional or special is mainly based on the test results of NRTs.
- It is easy to communicate test results to parents and others unfamiliar with tests.
- Norm-referenced tests have received the most attention in terms of technical data and research. They are specifically useful in problem identification and screening.
- To get a reliable rank ordering of the pupils with respect to the achievement we are measuring.

- To identify the pupils who have mastered the essentials of the course more than the others.
- To select the best of the applicants for a particular programme.
- To find out how effective a programme is in comparison to other possible programme.

Disadvantages of norm-referenced assessment:

The use of norm referenced tests data for the purpose of educational programming is questioned in many instances for the following reasons.

- Information obtained from norm-referenced testing is too general to be useful in everyday classroom teaching. Many educators disregard the prognosis and interpretative types of data provided by standardized tests because the information is often not directly applicable to developing daily teaching activities or interventions. What does knowing a child's WISC-R score or grade equivalent in reading specifically tell a teacher about what and how to teach? For instance, what is important is to know whether the child needs to learn initial consonants or is he having difficulty with comprehension.
- NRTs tend to promote and reinforce the belief that the focus of the problem is within the child. It is because the primary purpose of NRTs is to compare one student with another. However, although a child may differ from the norm, the real problem may not be within the child but in the teaching, placement or curriculum. Educators must begin to assess teacher behaviours, curriculum content, sequencing and other variables not measured by norm referenced tests.
- It is a mechanical process
- It cannot help assessing the other required aspect as it failed during assessment.
- It failed to collect information in totality as individual may not respond in good.
- There is a chance of exaggerated or sub average information.

Norm –reference approach to assessment is also followed in special education. For example, one of the diagnostic approaches to specific learning disability requires that the student should be performing two grades below the expected level in reading, writing, and arithmetic skills. In this method, the teacher should first know what academic

competencies are expected of a specific grade (i.e. norms) and contrast the individual's academic competency with them. This method will help the teacher to determine whether the student's academic competency is below, above or on par with the expected grades.

2.4.3Criterion-referenced assessment (CRTs):

Criterion-referenced assessment is concerned with whether a child is able to perform a skill as per the criteria set, or not. In contrast to norm referenced assessment, which compares one persons performance to others, criterion referenced assessment compares the performance of an individual to the pre-established criteria. In criterion-referenced test, the skills within a subject are hierarchically arranged so that those that must be learned first are tested first.

Glaser introduced the term criterion reference test (CRT) and defined it is a measure which assess student achievement in terms of a criterion standard thus provide information as to the degree of competence attained by a particular student which is independent of reference to the performance of others (Glaser, 1963). In maths, for example addition skills would be evaluated (and taught) before multiplication skills. These tests are usually criterion referenced because a student must achieve competence at one level before being taught at a higher level.

Advantages of criterion referenced assessment:

The criterion-referenced test results are useful:

- To identify specific skills that need intervention.
- To determine the next most logical skill to teach as the implications for teaching are more direct with criterion referenced tests.
- To conduct formative evaluation, that is, the performance of the student is recorded regularly or daily when the skills are being taught.
- It permits direct interpretation of progress in terms of specified behavioural objectives.
- It facilitates individualized instruction
- It enables the teacher to check on the student's progress at regular intervals.
- It eliminates pressures on the teacher to " teach to the test."

- It enables teachers to compile a comprehensive record of each child's development.
- To identify the master learners and non- master learners of a class.

Disadvantages of criterion-referenced assessment

- CRT tells only whether a learner has reached proficiency in a task area but does not show how good or poor is the learner's level of ability.
- Task included in the criterion referenced test may be highly influenced by a given teachers interest or biases, leading to general validity problem.
- It is important for only a small fraction of important educational achievements. On the contrary promotion and assessment of various skills is a vary important function of the school and it requires norm referenced testing.
- CRTs are difficult to obtain as they require detailed specification of objectives or out comes in behavioural terms.

2.4.4 Curriculum-Based Assessment (CBA)

The concept of curriculum based assessment is not new and has been employed for a number of years. CBA has been developed as a means to cope with low-achievers and children with special needs in regular schools. Further, it fits into the non-categorical model that is assessment is focused on testing curriculum-based skills and not on testing for labeling purpose.

The CBA aims to identify children's educational needs and the most appropriate forms of provision to meet those needs. Sality and Bell (1987) describes educational needs as "behaviours which a person lacks which are necessary in order to function effectively and independently both in the present and in the future".

The starting point for conducting CBA is the child's classroom. It is the suitability of this environment and the child's interaction with it that is assessed and not the child.

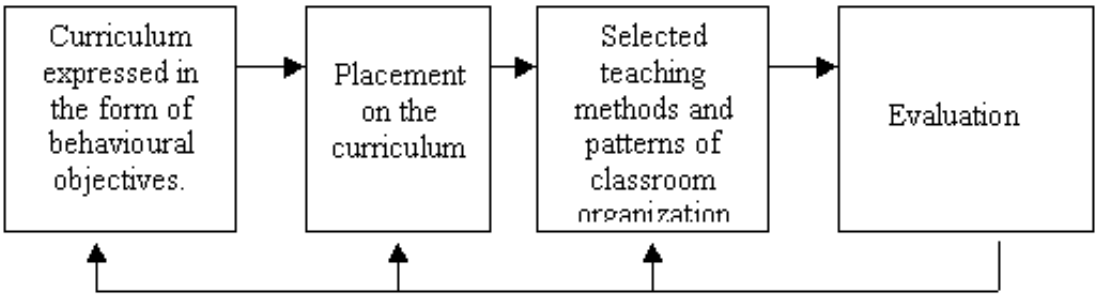
Definition

CBA has been defined by Blankenship and Lilly (1981) (quoted in Sality and Bell, 1987; pg.35) as the practice of obtaining direct and frequent measures of a student's performance on a series of sequentially arranged objectives derived from the curriculum used in the classroom.

It helps in finding out the current level of a student in terms of the expected curricular outcomes of the school. In other words, assessment instrument is based on the contents of the student curriculum. Some types of CBA are informal, while others are more formal and standardized.

Procedure followed in developing CBA

- The first stage in the process requires that the curriculum be defined as series of tasks which are sequenced and expressed in the form of behavioural objectives.
- Placement in the curriculum helps to identify which skills have been learned and those which need to be taught in the future. It pinpoints exactly where a child is on the curriculum.
- Selection of suitable teaching methods, materials and patterns of classroom organization for teaching.
- Evaluating children's progress – relates to the selection of teaching methods, patterns of classroom organization and choice of curriculum.
- Curriculum Based Assessment can therefore, be seen as a procedure which sets up situations where links are established between various teaching approaches and pupil progress.



(Source : Sality and Bell (1987) pg.36)

Relationship between CRT and CBA

Curriculum based measures are a kind of CRTs but they differ from the core CRTs by having direct link with the curriculum taught in the classroom. In other words, theitems that constitute the CRTs are taken directly from the curriculum. For example,

both the Madras Developmental Programme System (MDPS) and the Grade Level Assessment Device (GLAD) are CRTs but only the latter is a curriculum based measure, as it provides a direct link to the curriculum taught at a specific grade.

2.4.5 Teachers' Made Tests (TMT)

While formal intelligence and achievement tests can be useful for gaining extra finding for students with diverse abilities, and in some instances for assisting with programming, they often do not help teachers discover what a child already knows and what a child needs to learn in relation to the curriculum. In order to successfully program for any student, teacher must first know the ' starting point' fro which they can teach. The best way for teachers to discover what their students know and can do is through teacher-based assessment/tests. There are sonme commercially produced assessments available for teachers to use: however, the most effective assessments for the classroom are often those developed by individual teachers themselves. The basic philosophy of the teacher made tests is that the teacher's decisions are important in deciding the criteria. Defined this way, all the informal measures could be teacher made CRTs.

Teacher-made tests are written or oral assessments that are not commercially produced or standardized. In other words, a test a teacher designs specifically for his students. Teacher-made tests can consist of a variety of formats, including matching items, fill-in-the-blank items, true-false questions, or essays.

Advantages of TMTs

- Provide teachers with the means to gather evidence about what their students know and can do.
- Help instructors identify students' strengths and weaknesses. -Keep tabs on student learning and progress.
- Help teachers plan and conduct future instruction.
- Motivate and shape learning and instruction.
- Guide students toward improving their own performance.
- Gauge whether students are mastering state level educational standards.
- Determine if students are prepared for the high-stakes tests.

Limitation of TMTs

- They are often ambiguous and unclear
- They are either too short or too lengthy
- They do not over the entire content
- They are usually hurriedly conducted

Inclusive classrooms are those which primarily compare a child's progress with his/her own past performance in a variety of different areas across the curriculum. In that case these are the most helpful types of assessments for teachers. A combination of curriculum based assessment and intelligence assessment can be helpful in giving teaching and learning some appropriate direction.

2.4.6 Behavioural Assessment

It facilitates understanding of whole range of behaviours including the skill behaviours and problem behaviours. The assessment explains the behavior as a function of environmental conditions (e.g. stimulus, positive and negative consequesces), and provides a meaningful link between the skill behaviours and problems behaviours. Example, taking others' objects without permission (i.e. problem behaviour) may be due to lack of language skills (i.e. skill deficit). Restlessness in class may be linked with inability to follow instructions. If a child 's attendance is poor, it is not only important to see whether it is more than the expected limit (i.e. compared to norms) or criterion, but to quantify it and attempt to define if from the view points of its environment. To do this neither norm-reference nor the criterion-references are suitable. Here the teachers tries to notes the frequency of the behavior and analysis it from the point of environmental factors viz. antecedents and consequences.

Rational of Behavioural Assessment

Behavioural assessment utilizes the learning principles to understand the behaviours. That is, it constructs the behaviours as a function of specific antecedents and consequences. The rational of the behavioural assessment is as following:

- This approach postulates that behaviours are learned. It means every behavior develops with practice and experience. For example, shelf help skill, academic skills, academic skills are learned in informal and formal situations, respectively.

- Behaviouras are likely to increased when they are rewarded. Fro example, when a child is appreciated for taking bath of doing his homework, he is more likely to repeat that particular behavior.
- Behaviours are likely to decrease when they are not rewarded or punished.
- Behaviours occur with various intentions, for example, certain behaviours fetch us materials, attention/ social approval of others, or keep us occupied, or let us escape from a situation.
- The key to change the behaviours is to study what triggers the behaviours (i.e. antecedents) and what maintains or reduces the behaviours (i.e. the consequences wuch as rewards, punishment procedures), and what benefit (i.e. the function) the child derives through this behavior.
- Antecedents provide information on the reason, time, place and person triggering the behaviours. While consequences include the present ways of management of the behavior.

Above information is utilized in behavioural assessment to assess both skill behviours and problems behaviours. But the behavioural approach is not completely independent of other two approaches like NRT & CRT, as depending on the circumstances teacher can shift the approach to compare to the norms (e.g. whether the observed skill in mathematics is as good as that of others'?) or a set criterion (e.g. whether the child is ready to do the sums just with verbal prompt?). Specifically the behavioural approach shares certain characteristics with criterion-references approach. Nonetheless, behavioural assessment is required when range of skill deficits and problem behaviouras have to be managed.

2.4.7 Ecological Assessment

This approach stresses the importance of curricular items based on environment – instead of the " watered down curriculum" This approach emphasizes the inclusion of those content areas necessary for independent living in his/ her environment It gives emphasize the assessment of environment of the CWSN rather than child with Intellectual Disability. An ecological inventory involves analysis of multiple levels of environments before functional skills are identified. The first level of analysis is to identify the curriculum domain(s). Domains are settings rather than content areas. There are four

curriculum domains: (a) vocational, (b) leisure/recreational, (c) domestic, and (d) community utilization. The next level is to identify natural environments with each domain, followed by identification of sub environments within each natural environment. As a next step, the planner identifies activities within each sub-environment and then skills within each activity. These include such areas as language, motor, arithmetic, self-care, and social skills. However, their occurrence is measured within a social ecology (ie., within the four domains).

Domestic Environments:

The team considers the student's life in and around his / her actual home. Team members identify specific areas within and around the home (e.g. bedroom, bathroom, yard) where greater students participation is desired.

Vocational Environment:

For young children the vocational domain is usually in the home and school environments where children may have chores and class or school jobs.

Community Environments: These include transportation system, streets and sidewalks, and all businesses, services, and facilities in the community. For young children, school environments would have priority over other community environments. Therefore, children might receive instruction related to riding the bus and crossing streets. Others would be based on family needs.

Leisure Environments:

This will often overlap with environments previously identified because leisure activities occure in all these environments. Selection would reflect student interests and preferences. It may also be highly dependent upon interests and priorities of family members and typical peers, since thay ultimately enable the student to access the environments.

This would lead to the decision making on what the retarded child –

- Can already do
- What can be done by him with training and/ or adaptation
- What he cannot do at all

Once environments in which the student will participate are identified, the next steps in designing an individualized, ecology curriculum are to identify priority activities and routines and to identify priority skills.

2.5 Methods and Tools of Assessment

2.5.1 Methods of Assessment

We have learned the concept of assessment and also the purposes of assessment, but it is also essential to know means and modes of assessment. Precisely information comes from the methods and tools. The methods indicate how to conduct the assessment. Let us recall the example of arithmetic competency. A teacher might gather information about a student's arithmetic competency by observing classroom performance, surveying the notebooks, by asking certain questions, by assigning specific worksheets. All of these procedures indicate that assessment can be done in different ways. Let us now study the various mode of assessment.

The assessment process involves collection of data through various modes. This is essential as the assessor or teacher aims at collecting information in all the areas of development of a child, which helps the teacher/assessor in making appropriate decisions. The assessment information can be collected from primary sources and secondary sources. Primary sources are those which give us direct information. The information given by the student, the teacher's observation are the primary sources. Gathering information from any sources other than observing and interviewing the individual is secondary sources, e.g. parents, teachers, family members, case files, test reports etc. Primary sources are more reliable, as they provide direct immediate information. Secondary sources augment the information gathered from the primary sources. Whether both are required it depends on the situation. Therefore, they are not mutually exclusive but complimentary to each other. Common methods of assessment are as given below:

- Observation
- Interview
- Rating Scale
- Testing
- Experimentation

- Clinical Investigations
- Case Study

Observation

Observation, as a fundamental technique of data collection, refers to watching and listening to the behavior of other persons over time without manipulating and controlling it and record findings in ways that allow some degree of analytical interpretation and discussion. Thus, observation includes broadly selecting, recording and encoding behavior for empirical aims of description.

Purpose of observation

Mehrens and Lehmaun (1984) suggest the following advantages:

- Frequent observation of a student work can provide a continuous check on progress and can detect errors as they arise and take corrective action quickly
- Observational techniques are not so time consuming or threatening for the student as are achievement tests and
- Observational data provide teachers with valuable supplemental information much of which could not be obtained in any other manner.
- One major purpose of observation is to capture and study human behavior as it actually happens.
- Another purpose of observation is to provide a graphic description of real life that cannot be acquired in other ways.
- Another purpose of observation is exploration. When the investigator observes human behavior in a real life setting, he gets a good chance to explore those variables which were important but overlooked.

Though observation gives the teacher a chance to note required information directily, it may not always feasible tp observe all the behaviours (e.g. brushing teeth in natural setting, behaviours during early stages of development).Or, specific behaviours may not occure when the teachers decides to observe (e.g. unruly behaviours in the class). Though some may use mechanical devices such as recorder, electronic monitors etc. to overcome the problems involved in manual observation. They are obviously expensive too.

Interview:

Information is also gathered regarding the student's social skills, and the management of student in various environments and situations through interviewing parents, family members and others and the student himself. The procedure for interview is different from that for the questionnaire , but both have the same aim, and it is to obtain data regarding the respondents with minimum bias and maximum efficiency. Interview is a face to face situation or over telephone between the interviewer and the respondent, which intends to elicit some desired information from the latter. Thus an interview is a social process involving at least two persons, the interviewer and the respondent.

There are 2 types of interview, namely, formal interview and informal interview.

A formal interview may be defined as one in which already prepared questionas are asked in a set order by the interviewer and answers are recorded in a standardized form. It is also known as structured or patterned interview.

An informal interview is one where ther are no pre-determined questions nor is there any pre set or of the questions and it is left to the interviewer to ask some questions in a way he likes regarding a number of key points around which the interview has to be built up. As most things depends upon the interviewer, the situation remains unstructured and therefore such an interview is also known as an unstructured interview.

Testing

Testing the child and knowing the ability of a child yourself is always recommended as it provides first hand information. For example, instead of asking a parent whether her child can read and write words, or numerals, you test the child yourself using appropriate materials to check. If we depend on parents for information, we may miss out on identifying specific problems/content which in turn hinders further learning. To explain further, the parent may say that her son is able to read and write numerals upto 10. When you ask the boy to read the numerals by pointing not sequentially, he may read incorrectly, but, he could say orally 1-10 in sequence. If we had taken the parents information on face value, we would have selected the content for teaching numerals from 11 to 15 or 20 as an objective, which is inappropriate as per the child's ability. On the other hand, what is required is that, the boy should be taught to read the numerals independently when presented not sequentially upto 10. Hence, it is necessary always to test the child directly by the teacher/assessor to know the current performance level

of the child. However, there may be some activities, for which the teacher may not be able to test the child directly (eg. Taking bath, behaviour of a child during social functions in the family, in the community, interaction with friends and neighbours) and has to collect information from family members. While selecting a test it is important to see whether it is valid for the purpose it is being used, reliable, objective, simple, cost-effective and ecologically valid or not. Lastly but most importantly, the test should be compatible to the child's abilities.

Experimentation

Sometimes, we may not get information either from observation, interview or testing. For example to understand the efficacy of social rewards and material rewards, the teacher may observe the student's performance under tow conditions- one, involving contingent presentation of social rewards and the other with material reward. Finally the teacher may draw necessary conclusions depending on the student's performance. However, experiments are not as simple as exemplified here. They require systematic planning and stringent analysis of the information. If properly planned, experiments provide information on cause - and –effect relationships.

Clinical investigation

This method generally refers to medical investigation. Therefore, it has got less relevance in special education. Examples of this are CT scan, EEG, MRI, Thyroid Profile, Chromosomal Analysis, Serum Estimations, Hearing and Vision Tests etc. However, the data provided by these investigations may have indirect bearing on certain classroom activities. Report on vision will certainly help teachers making decisions on the seating arrangement, colour and presentation of the teaching- learning material: illumination of the class. Similarly, student's EEG indicating epilepsy will help the vocational instructor protect the child from accidents in work area.

Case Study

Case Study utilizes all or some of the above methods to record the significant events and put them in a chronological order. It is the method of behaviour investigation in which we try to study the behaviour of an individual in all the essential aspects by analyzing the past record , present position and future possibilities regarding his felt problem or otherwise guidance functions. The data arranged so will give meaningful information about the causality of specific conditions and problems with reference to

the individual. The preparation of a case study is not the work of a single individual but the combined venture of social worker, teacher, parents, medical professional, psychologist and others professional as required.

2.5.2 Screening Tools

Screening does not result in a diagnosis of a disorder but, rather, determines the need for further assessment and/or referral for other services. Screening may not be a needed step for individuals with ID, particularly those with more severe limitations in intellectual or adaptive functioning. For these individuals, a comprehensive assessment is likely to be the first step.

Screening typically includes

- gathering information from parents, teachers, and co-workers regarding concerns about an individuals language(s) and skills in each language;
- conducting a hearing screening to rule out hearing loss as a possible contributing factor to language difficulties;
- administering formal screening assessments that have normative data and/or cutoff scores and that have demonstrated evidence of adequate sensitivity and specificity;
- using informal measures, such as those designed by the clinician and tailored to the population being screened (e.g., preschool, school-age/adolescence, adult);
- observing speech production, language comprehension and production, social communication, and literacy skills in natural environments; and
- conducting a screening of swallowing function.

Screening may result in recommendations for

- complete audiologic assessment;
- comprehensive language assessment;
- comprehensive speech sound assessment, if the speech sound system is not appropriate for the individuals age and/or linguistic community;
- comprehensive literacy assessment; and
- referral for other assessments or services.

Usually screening tools or methods are designed in such way that they can be applied by aneone with minimum or no training. They are also easy to administer of follow. Usually those cases that are identified to be positive on screening are taken-up for further assessment. This way the resources are managed better. Nevertheless, it is important to note that being positive on screening does not necessarily mean that the same results should come on assessment. Therefore, it could be understood that screening is just a preliminary step but not a substitute to assessment. There are several screening tools means for identification of intellectual disability, which are as follows:

Sl. No	*Name of Instrument*	Age Range	Administtration Time	Author (s)	Year
1	Developmental Screening Test	1-15 years	10 minutes	Bharat Raj	1977
2	Gesell Drawing Tests	1 -8 year	15 minutes	Verma, Dwarka & Kausha	1972
3	Infant Intelligence (Development)	0-3 years	30 minutes	Kulshreshta	1975
4	Mental and Motor Growth of Indian Babies	1-2 years	15-20 minutes	Pramila Phatak	1976,1977
5	Vineland Social Maturity Scale	0-15 years	15-20 minutes	Malin	1970

2.5.3 Importance of Early Identification

Since intellectual disability is not curable, early identification is very useful. Early identification gives a scope for early intervention. From the developmental perspective, fostering optium growth and prevention of developmental disabilities is the essential component of early identification. Jeychandran (1968) conducted The Madras Project, the first in India, concluded as follows:

- It is feasible to train mothers in day care centres; the longer the training the more positive and lasting the effect on the children. The trained mother gains a caring position as a carry-over agent.

- Greater the parental participation, faster is the impact on the child. Positive attitudinal changes in parents may be
- seen within six months' of commencement of training.
- Earlier the intervention, better are the results; it limits disabilities; it helps in mainstreaming and in appropriate
- placement in special schools; fosters the emergence of parents' networks and the provision of special schools in the community.
- Individualized Family Services Program can be effective.
- An initial total involvement, from birth to two years, with gradual weaning, helps the parents become effective carry over agents at home.

Overton (2000) reports that toddlers from birth to age two years who are experiencing developmental delay in one or ,more of the following ares are eligible for special education and related interventions: cognitive development, physical development and sensory development, communication development, social and emotional development, and adaptive development.

Early identification can be done by educating the parents about Biological and environmental risk factors for developmental delay. Some important biological indicators are as following: children born before 38 weeks of gestation, delayed birth cry (i.e. more than five minutes), low birth weight (i.e. less than 1.5 kg), epilepsy/seizures, cerebral infection, sensory-motor deficits, prolonged respiratory illness etc. Environmental factors are : poor mother-child interactions, low maternal education or awareness levels, dysfunctional families, and poor family support.

It is necessary to note that all the risk factors reported here are not specific to intellectual disability but in general suggest a high propensity for any kind of disability. Based on the early indicators the child identified at risk for intellectual disability can be taken up for further screening and developmental assessment.

2.5.4 Developmental Assessment Tools:

Developmental assessment is the process of mapping a child's performance compared with children of similar age. The comparison group is obtained from a representative sample of the population that the child comes from. Several factors contribute to

performance varying greatly between different population groups.In a multicultural society it can be challenging to find appropriate benchmarks for these standards Developmental assessment is the process of mapping a child's performance compared with children of similar age. Thecomparison group is obtained from a representative sample of the population that the child comes from. Several factors contribute to performance varying greatly between different population groups. In a multicultural society it can be challenging to find appropriate benchmarks for these standards Developmental assessment is the process of mapping a child's performance compared with children of similar age. The comparison group is obtained from a representative sample of the population that the child comes from. Several factors contribute to performance varying greatly between different population groups. In a multicultural society it can be challenging to find appropriate benchmarks for these standards Developmental assessment is the process of mapping a child's performance co Developmental assessment is the process of mapping a child's performance co Developmental assessment is the process of mapping a child's performance.

2.5.5 Developmental/Intellectual Assessment Tools In Western Context

1. The Ages and Stages Questionnaire (ASQ) (Bricker & Squires, 1995) is a standardized screener for developmental concerns in children from 4 to 60 months of age. Nineteen different questionnaires cover designated age intervals. Each questionnaire covers fine motor, gross motor, problem solving, communication, and personal social areas of development. Each sub-section is scored on a pass/fail basis. Pediatric practices use this tool to learn about general development.

Bricker, D., Squires, J. (1995). *Ages and Stages Questionnaire: A parent-completed child monitoring system* (2nd ed.) Baltimore, MD: Brookes.

***2. The Mullen Scales of Early Learning (MSEL*; Mullen, 1995)**

The MSEL is a standardized, comprehensive measure of development for infants and preschool children from birth to 68 months. It includes five subscales: visual reception (i.e., solving problems without language), gross and fine motor, receptive and expressive language. The MSEL can be administered in a playful fashion. Items can be administered in any order, allowing for the examiner to adjust to the interests and motivation of the child being tested. The MSEL provides estimates of verbal and nonverbal problem-solving abilities. It is widely used in studies of young children with

developmental disabilities. The MSEL demonstrates strong concurrent validity with other well-known developmental tests of motor, language, and cognitive development. Mullen, E. M. (1995). *Mullen scales of early learning* (AGS ed.). Los Angeles: Western Psychological.

3. Bayley Scales of Infant Development –II and II I(Bayley, 1993; 2005). The Bayley is a standardized developmental assessment for young children (1-42 months) that requires approximately 45-60 minutes to administer. The Bayley provides a Mental Development Index (MDI) and a Psychomotor Development Index (PDI). The direct assessment also includes additional checklists for parents to complete. Psychometric characteristics are strong and the materials are child-friendly. Administration requires training for fluent, standardized use. Perhaps more appealing to young children than the MSEL (in my opinion), it can be harder to tease apart verbal and nonverbal problem-solving on the Bayley than on the MSEL.

Bayley, N. (1993). *The Bayley scales of infant development* (2nd ed.). San Antonio, TX: Harcourt Brace. Bayley, N. (2005). *The Bayley scales of infant development* (3rd ed.). San Antonio, TX: Harcourt Brace.

4. Differential Abilities Scale (DAS; Eliot, 1990)

The DAS is a standardized test of intelligence with versions suitable for children from ages 2 ½ to 18 years that provides age equivalents and standard scores. The DAS can be administered to children who are not verbal and it is expected that most children will obtain basal scores on the DAS – if not on the school-age version, then on the preschool version. The School-Age Version is comprised of six core subtests which yield summary scores for: verbal performance, nonverbal performance, and spatial performance, as well as an overall score termed the General Conceptual Ability (GCA).

While subtests provide T scores (M = 50, SD = 10), the verbal, nonverbal, spatial, and GCA scores are reported as standard scores, with a mean of 100 and standard deviation of 15. Ability scores, T-scores, and age-equivalent scores are computer for each subtest and standard scores are provided for the three composites and the General Conceptual Ability Score. Verbal performance and Nonverbal performance are usually used to reflect a child's profile of cognitive functioning. In terms of its psychometrics, the DAS manual reports good to excellent properties in terms of both validity and reliability and shows acceptable convergent reliability with both the WISC-IV and WASI

(Eliot, 1990). Eliot, 1990. *Manual for the Differential Ability Scales.* Austin, TX: Psychological Corporation.

5. Wechsler Preschool and Primary Scale of Intelligence- Revised (WPPSI-R) *(Wechsler, 1989).* The WPPSI-R is a standardized assessment of intellectual potential designed for children ages 3 – 7 years. It contains 12 subtests, which load on either a Verbal Composite or a Performance Composite. It also provides a Full IQ estimate. Wechsler, D. /Psychological Corporation (1989.) *Manual for the Wechsler Preschool and Primary Scale of Intelligence- Revised.* Austin, TX: Harcourt.

6. Wechsler Intelligence Scales for Children-IV (WISC-IV) *(Wechsler, 2003*). The WISC-IV is a standardized test of intelligence for children ages 6-16. It examines both verbal and nonverbal intelligence performance and provides age equivalents and standard scores for each. The WISC-IV generally demonstrates good psychometric properties and shows acceptable convergent reliability with both the WASI and DAS (Wechsler, 2003). Wechsler, D./Psychological Corporation (2003). *Manual for the Wechsler Intelligence Scales for Children.* Austin, TX: Harcourt.

7. Wechsler Abbreviated Scales of Intelligence (WASI) *(Wechsler, 2002).* This IQ screener provides an estimate of the child's verbal and nonverbal abilities in a relatively brief period of time. The WASI contains four subtests (Vocabulary, Similarities, Block Design, and Matrices), takes approximately 30 minutes to administer, and is appropriate for children and adults older than 6 years. The WASI has been shown to provide scores that are reliable with a full battery (i.e., WISC-IV) in samples of children with autism spectrum disorders. The WASI also shows acceptable convergent reliability with both the WISC-IV and DAS in population-based samples (Wechsler, 2002). Wechsler, D./ Psychological Corporation (2002). *Manual for the Wechsler Abbreviated Scales of Intelligence.* Austin, TX: Harcourt.

8. Stanford-Binet – Fifth Edition (SB-5) (Thorndike, Hagen & Sattler, 1986/2005). The SB-5 is a standardized intelligence test designed for age 2-through older adulthood. It provides composite scores and overall IQ estimates and has excellent psychometric properties. The SB-5 has a brief IQ battery that is useful in research protocols. Thorndike, Hagen & Sattler, 1986/Riverside, 2005. *The manual for the Stanford-Binet Intelligence Scales.* Los Angeles: Riverside.

2.5.6 Developmental Assessments to Try if Person is Nonverbal or Difficult to Engage in Standardized Testing

1. Child Development Inventory (CDI; Ireton, 1992). The Ireton CDI is a 270-item parent/caregiver checklist that covers 8 areas of development (social, self-help, gross motor, fine motor, expressive language, language comprehension, letters, and numbers) and is suggested to be used for persons whose overall developmental level is approximately 6 years or less. Norms are available for chronologically young children and age equivalent scores can be derived for older individuals who are developmentally impaired. The CDI provides developmental estimates that are roughly equivalent to the results of standardized assessments of overall development. Common practice in research and clinical protocols is usually to attempt standardized assessment before moving to the CDI as the tool of choice. Ireton, H. (1992). *Child Development Inventory Manual.* Minneapolis, MN: Behavior Science Systems.

2. Leiter International Performance Scale-Revised (Leiter-R; Roid & Miller, 1997). The Leiter-R is a standardized nonverbal measure of intelligence, often used to estimate the nonverbal problem-solving potential of individuals who do not use speech. Several summary scores can be derived; most studies in autism research use the ‘‘Brief IQ’’, which can be obtained in less than an hour and is based on four subtests (Repeated Patterns, Sequential Order, Figure-Ground, and Form Completion). Convergent validity varies, but the Leiter may produce elevated scores, relative to the Wechsler tests. Roid, G. H., & Miller, L. J. (1997). Leiter international performance scale revised. Wood Dale, IL: Stoelting Co. J Autism Dev Disord (2007) 37:49–61

2.5.7 Developmental screening tools in Indian context:

Developmental Assessment Scale for Indian Infants (DASII)

It assesses development in the age range of birth to 30 months and provides a measure of motor and mental development as Motor Developmental Quotient (DQ) and Mental DQ, respectively. Developmental delay is defined on DASII as DQ score d”70 (d”2SD) in either the mental or motor scale.

Trivandrum Developmental Screening Chart (TDSC)

The TDSC was designed by selected 17 test items from BSID (Baroda Norms). It was validated both at hospital and community level against the standard Denver

Developmental Screening Test. TDSC had a sensitivity of 66.7% and specificity of 78.8% which makes it an acceptable simple screening tool even for the community level worker .

Disability Screening Schedule (DSS): It is a broad based onetime screening schedule for all the major disabilities, viz., locomotor, visual, hearing and intellectual in early childhood (0-6 years). DSS has a sensitivity of 0.89 and a specificity of 0.98

National Institute for the Mentally Handicapped Developmental Screening Schedule (NIMH DSS)

The aim of this study was to develop a reliable screening device for the early identification of children with ID aged 0 6 years in rural areas of India for use by Anganwadi workers (Arya, 1991). Two rural areas where the Integrated Child Development Scheme (ICDS) was being implemented were selected which had a total population of 75,000 in 63 villages of which 25 were randomly sampled for the study. A pilot study was conducted on 180 children aged 0 6 years and 600 children were included in the main study.

The screening tool was based on developmental milestones which were: simple, low cost and relevant to rural culture; measure abilities valued by parents and village workers; measure discrete and observable behaviour with a high degree of reliability rather than parental report with a clear pass or fail mark; and measure relevant aspects of development. Initially, 98 items were selected from which 10 items were selected to form the National Institute for the Mentally Handicapped Developmental Screening Schedule (NIMH DSS) based on pilot testing on 180 children aged 0 6 years.

To validate the NIMH DSS, 20 Anganwadi workers screened a total of 600 children aged 0 6 years, with alternate children (n=300) being assessed by a psychologist. Of the 600 children 3.2% screened positive, 100% of whom were confirmed as having developmental delay by professional assessment. One per cent of screens were false positives, and 0.8% were false negatives. 95% were correctly identified as normally developing. Sensitivity was 0.79 and specificity was 0.99. Overall screening accuracy was 0.98. The authors conclude that the NIMH DSS can be considered an effective tool for screening pre school children with ID in rural areas of India.

2.5.8 Intellectual –various standardized assessment tools: Binet-WISC-VSMS-DST Indian Adaptations and other Indian Tools:

"Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with the environment" - David Wechsler (1975). Level of intelligence is assessed by intelligence test (whether it may be individual or group test) is psychological in nature. Intelligence test provides IQ (Intelligence Quotient) which is the index of mental maturity and cognitive functioning. Intelligence assessment has an important role in Intellectual Disability, as sub –average intellectual functioning is one of the criteria of diagnosis. Intelligence is estimated only by applying intelligence scales. Based on its content intelligence scales are divided in to verbal and performance / non verbal scales. Though there are group tests that can be administered on many at ones, individual tests are preferred for intelligenc testing, which requires observations of the individual characteristics such as attention, problem solving skills, motivation. Some of the commonly used tests are shown below:

Adaptive Behaviour

Definition

The adaptive behaviour in general refers to the way in which an individual functions in his or her social environment. The American Association on Intellectual Disability defines adaptive behaviour as, *"the effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his/her and culture group".*

Assessment of Adaptive Behaviour

The behaviour of an individual changes regularly, depending on the types of social situations to which the individual has to respond. Many behaviours which are appropriate in one setting could be totally inappropriate in another. The time and place and some times the age determines the appropriateness of a behaviour. The behaviour by itself is not 'good' or 'bad'. For example, sleeping in the bedroom versus classroom. Sleeping, which is an essential biological need becomes an inappropriate behaviour in the classroom, whereas, the same behaviour in the bedroom becomes an appropriate behaviour. The mentally retarded persons are known to exhibit inappropriate behaviour due to skill deficits or inability to perceive the appropriate behaviour for a given situation. Hence, the purpose of measurement is to determine what areas need special help, or special training in a particular situation.

Adaptive behaviour assessment determines the current level of functioning of the individual. It reflects the strengths of the individual as well as the weaknesses. Hence, the primary reason for measurement is an effort to help the individual to learn to improve themselves and to function within the socially acceptable norms. Adaptive behaviour assessment, which is based on the direct reporting of observable behaviours gives specific information on the assets and deficits of the individual. The reason for the deficits or not doing a task may fall into the following categories.

a) The individual may never have had the experience or opportunity to carry out those particular tasks or behaviours.

b) The individual may have certain physical limitations which prevent the performance of those behaviours.

c) The individual may be totally under-motivated for those particular behaviours because ofcertain cultural patterns or experiences.

Adaptive behaviour scales / Tools for assessment of adaptive behaviour

the adaptive behaviour, which projects our behaviour in the personal and social areas, reflects our ability to respond to the environment. Thus adaptive behaviours come under the broad domains of functional independent skills, personal and social responsibility, and independent living skills. These elements combine to form an organized behavioural pattern of the individual

Scales of intellectual functioning and adaptive behavior adapted or normed for Indian population

Test Indian Adaptation Age Content Merits Challenges	**Indian Adaptation**	**Age**	**Content**	**Merits**	**Challenges**
Seguin Form Board	Bharatraj (1971) Goel and Revalidated by Sen (1984); Venkatesan (1998)*	Reliable for 3 to 11 years old, but valid for all age groups of people with ID	Performance test	It serves as a quick measure of general intelligence	It is not much valid for children aged above 11 years of age, when it becomes more a measure

Test Indian Adaptation Age Content Merits Challenges	Indian Adaptation	Age	Content	Merits	Challenges
					of visuo-motor speed than global intelligence
Binet-Kamat Test of intelligence	Kamat (1967) adapted 1916 revision of Binet-Simon Test; Reappraised by Venkatesan (2002a	3 years - adulthood	Age Scale Predomina-ntly verbal	Balances verbal and performance items	Specific test items depend on formal education. Verbal items not available for vernacular languages other than Kannada and Marathi. some items are completely redundant
Stanford-Binet Intelligence Scale	Kulshreshta	3 years - adulthood	Age scale; Predomina-ntly verbal	Balances verbal and performance items and also offers a short scale. More suitable for Hindi-speaking population	Did not include people with low intelligence in the sample
Malin's Intelligence Scale for Indian Children	Malin (1973) adapted the original scale of Wechsler's Intelligence Scale for Children	6-16 years	Has verbal and performance tests	It measures both verbal and performance Intelligence	Some of the scales depend on formal education

Test Indian Adaptation Age Content Merits Challenges	**Indian Adaptation**	**Age**	**Content**	**Merits**	**Challenges**
Developmental Screening Test	Bharat Raj (1977)	0-15 years	Developmental tasks	It assesses global development	DST is highly loaded with speech and language items; hence, it must be interpreted cautiously in case of conditions such as cerebral palsy, autism, and speech and hearing impairment
Vineland Social Maturity Scale	Malin (1968); expanded by Bharatraj (1992)	0-15 years	Culturally appropriate adaptive behavioral skills	It gives a comprehensive profile of adaptive behavior	It may need revision in tune with the changing concepts of adaptive behavior
Progressive matrices a. Standard	Raven (2003); Indian norms are available (Deshpande et al., 2002)	11 years to adults	Nonverbal	It assesses the general intellectual abilities trough form comparisons and analytical reasoning. This test is culture-fair to a large extent	Not suitable for illiterates and persons at the lower end of ID spectrum. It does not yield IQ scores.

Test Indian Adaptation Age Content Merits Challenges	Indian Adaptation	Age	Content	Merits	Challenges
b. Colored Gessel's Drawing Test	Raven (2003); Verma et al. (1972); Revalidated by Venkatesan (2002b)*	5-11 years 15 months to 8 years	Performance test	It gives percentiles It is a reliable screening test of mental development	It is not a valid test for the children who have not attended school or have no experience with a pencil or children with specific finger dexterity problem
Bhatais's Battery of Performance Test of Intelligence	Bhatia (1955)	11 years and above	Performance test	Many subscales are indigenous	It measures IQ above 70; hence, not suitable for use with suspected cases of ID
Wechsler Intelligence Scale for Children - fourth edition (India)	Wechsler (2003)	6-16 years and 11 months	Contains both verbal and performance scales	It has updated areas of assessment in accordance with the development of children in India	Time consuming and costly

The table is adapted from Arya, S., Kishore, M.T., Ranga, S., Bisht, J. Current Status of Intelligence testing in India: Perspectives on disabilities. NIMH News Letter, 2005; 18 (2 and 3), 19 23. ©NIEPID (formerly, NIMH), Secunderabad. *Revalidation/reappraisal details could be found in Madhavaram, T.K. Intelligence testing and its implications for disability evaluation in individuals with Intellectual Disability. Psychol Stud 2011;56(3):289 294. DOI 10.1007/s12646 011 0093 y. DST – Developmental Screening Test; IQ – Intelligence quotient; ID – Intellectual disability

The list given in the table is not exhaustive. Rather it is important to note that there are several standardized tests but the selection depends on the characteristics of the individual. If the child has problems in communication it is better to avoid verbal scales, and same goes for performance scales in the case of motor deficits. Lastly, IQ scores should not be interpreted rigidly for the IQ estimation could be confounded by students' characteristics such as lack of formal education, sensory-motor problems, communication deficits, motivation to take the test and behavioural problems, which are common to intellectual disability,. Consequently, low IQ sometimes may be due to additional factors other than actual cognitive dysfunction. Moreover, while IQ can provide a general level of expected abilities, it cannot provide information on the actual skill repertoire necessary for educational programme plan. Only when combined with the developmental history, informationon skill behaviours does IQ provide meaningful direction to diagnosis and programme planning.

2.5.9 Social, Behavioural, Language and Speech Assessment Tools and other Indian Tools:

Social skills foster healthy interpersonal relationships, promote independence, and are crucial to coping with stressful situations. Deficits in social skills are a critical component of intellectual disability (ID). They are related to many important personal and social outcomes in this population. Inappropriate social behaviour of persons with intellectual disability may result from incorrect perceptions of social situations. They also have problems in detecting and understanding contextual clues and situations, are unable to identify emotional and social relationships, and do not understand others' feelings and perceptions. They may lack an understanding of cause-effect relationships in social situations. Quite often they do not know the appropriate way to behave in specific situations, and how to converse in a different manner with adults and peers. They may not notice how people respond to their behaviour and may misconstrue social details and inflections (Kronick, 1983).

Most studies reveal that individuals with intellectual disability may make progress in their level of adjustment as they move through adult life (Heber & Garber, 1984). Very often, however, they behave inappropriately in social situations, and are rejected and isolated by their peers. They are socially incompetent and unable to deal with life's challenges or to respond effectively to society (Deshler & Schumaker, 1983).

Approaches to assessment

Schumaker & Hazel (1984) provide a typology of social assessment approaches with a general discussion of the advantages and disadvantages of each type. They set a number of criteria for ideal measurement of social skills functioning. An assessment must measure whether or not skills are present in the person's repertoire (overt and cognitive behaviours), the quality of behavioural performance (sequences, timing, contexts, content), the person's physical appearance, and the use of skills in situations of interest and the consequences of those behaviours. Overall, it is important to distinguish between performance deficits and skill deficits. Four general approaches to social skills assessment are as follows:

Observation and Coding of Behaviour.
Social interactions of the person of interest are defined in terms of a series of observational codes. The occurrence of these coded behaviours is then observed and recorded to yield data on the frequency and/or duration of their occurrence.

Observational checklists.

Behaviours of interest which could occur in a specific kind of interaction are listed. After watching an interaction, which could be in a role-playing situation, naturally occurring situation, or a contrived situation within the natural milieu, the rater indicates how well each behaviour was performed. Role-play is quick and easy to do, but may not accurately reflect behaviours that occur in natural situations. Observation in natural situations is optimal but behaviours might not occur or might be inhibited by the observer's presence. Contrived situations programmed to occur without the advance knowledge of the target person can be a good compromise.

Sociometric Assessment.

This refers to the practice of determining how well-liked or socially accepted individuals are. A measure might be devised comprising a series of items representing a range of social relationship attributes each assessed via a Likert-type or visual analogue scale. In a work setting, for example, the workforce in a particular area might be asked to rate colleagues. The ratings are averaged to obtain a measure of social acceptance.

Behavioural rating scales.

These list several behaviours or descriptive items and the respondent (person themselves or significant other) indicates whether the skill is present in the person's repertoire or how well the behaviour is 'emitted'.

General behavioural rating scales which include a section on social skills

Adaptive Behavior Scales (ABS)

Vineland Adaptive Behavior Scales (VABS)

Madras Development Programming System (MDPS)

Behavioral Assessment Scale for Indian Children with Intellectual Disability (BASIC-MR)

Functioanl Assessment Checklist for Programming (FACP) etc.

Language Assessment:

Speech and language are the means by which people communicate, and share thoughts and ideas. It is a common code shared and understood by the people in a community and which children learn through social interactions (Kumin, 2003). The use of language comprises receiving and sending messages. Receiving and understanding speech messages is called receptive language, and sending speech messages is called expressive language.

Good language skills are one of the main preconditions for success in the school. The most intensive period of language development in children is between 3-5 years of age, a development that is parallel to the maturation of the brain structures. Typically developing children have mastered the basic components of language by the age of 3 or 4 years (Tager-Flusberg & Sullivan, 1998). Around that time, according to these authors, children with intellectual disability are still at the early stage of learning language and acquire only a few words, such as the names of family members and a couple of objects.

Speech and language disorders are one of the main reasons for referrals to paediatric services, accounting for about 40% of cases (Harel et al,1996). Language difficulties are prevalent in preschool and school-aged children and constitute one of the most common problems at this age (Dockrell, 2001). Children with intellectual disability have an even higher risk of developing some type of speech and language disorder. Intellectual disability per se has a detrimental effect on language development. Speech and language disorder is one of the main traits which, if not treated early, can have a long-lasting negative effect on the child's development.

LANGUAGE ASSESSMENT TOOL:

Generally language assessment involves both receptive and expressive skills encompassing student's ability of pronunciation, grammar skills, vocabulary and meaning, applicability in particular situations, and Meta-linguistics. While informal assessment can be done with reference to the developmental milestones, , for comprehension information standardized tools can be used.

Language Assessment Tool is a standardized test for language assessment commonly used in India. It was developed by Subha Rao, 1992, form National Institute for the Mentally Handicapped, Secunderabad. The language assessment tool is a checklist that has been developed with the main objective of collecting information regarding the speech and language development. The checklist has been mainly developed for the use with children having developmental delay/Intellectual Disability. However, it can be used in general to obtain information on the development of speech and language in the children.

The checklist contains items across the age ranges from birth to three years. The checklist has both receptive items and expressive items. The items are incorporated based on the speech and language development of normal children. That means most of the children developing normally as per age show the speech and language behaviors as listed in the tool.

The responses can be recorded by the parents and significant others from observation of the child in day to day activities/real life situations and also when possible by evaluating the child. The responses for each item can be recorded as Yes/No/Not sure. Both verbal and non-verbal responses can be recorded particularly in expressive items.

The tool can be used mainly to know information on whether the child's speech and language development is normal or whether there is any delay. Upon using the checklist with a child, if responses like 'No' and 'Not sure' are recorded for certain items and/or a delay is noticed across the age ranges, it may indicate that there could be some problem with the child's speech and language development and immediate help may be sought from a qualified 'Speech and language pathologist'.

A qualified 'Speech and language pathologist' would use specific diagnostic tools and assess the child's speech and language development and diagnose the problem if any and would also provide therapy for the speech and language problems / development.

Others (Academic Achievement):

GRADE LEVEL ASSESSMENT DEVICE (GLAD) GLAD by Narayan (1997) was used to find out the processing problems in child's academic performance. It is useful for children who are scholastically backward to find out 'why' they fail. The tool is easy to administer and useful to refer child for remedial teaching. It can be used from the age of 6 years for grades I to IV. It is available in English, Hindi and includes mathematics. This test consists of two formats. Format I has the test booklets of class I to class IV in the form of worksheets of Hindi, English, and Maths. Items include tasks requiring verbal and written responses to questions. Format II: is used for noting observations while the child is performing on format I. It contains three section. Section-I deals with child's personal details, family history, school history etc. Section-II requires the teacher to note information on sensory-motor skills, which will be useful for medical referral. Section –III indicates the possible errors for each subjects so that when they are noted the teacher can understand the processing deficits involved in specific subjects. soft neurological sign of specific learning disabilities.

Salient features of the tool:

- Overall information can be used to identify learning problems with reference to curriculum
- It is possible to ascertain the grade levels in Hindi, English, and Mathematics
- Information obtained can be used in diagnosis and management of specific learning disabilities in primary class levels
- It is reliable, valid, and easy to administer and interpret
- Has relevance to all parts of India, as it is based on MLL, and also the Central and a State Board Syllabus

Scoring

The worksheets were used and child's responses were recorded on scoring sheet . Testing was done in three sessions, one sitting for each Hindi, English and Maths.

Comprehensive summary report was prepared in the end of the test. The scores in a given class level when converted to percentage are grouped as follows:

Children's level of Functioning

Over 70%	Independent level
40% to 69%	Instructional level
Below 40%	Frustration level

Reliability and Validity

Test- retest reliability coefficient of the test for class II is 0.98 and for class III 0.99. Criterion group validity correlation scores for class II is 0.86 and for class III 0.76. Content validity also shows that contents of GLAD are valid.

Peabody Individual Achievement Test-Revised (PIAT-R)

The Peabody Individual Achievement Test (PIAT-R/NU) is a 1998 revision with a Normative Update. The PIAT-R/NU is published by Pearson Assessments and the author is Frederick C. Markwardt, Jr.The test is designed to measure academic achievement for ages 5-0 to 22-11. It hsd been standardized on US national sample. The PIAT-R/NU is administered individually and administration time is 60 minutes. It consists of nine scores, which include General Information, Reading Recognition, Reading Comprehension, Total Reading, Mathematics, Spelling, Total Test, Written Expression, and Written Language.

The PIAT-R/NU does not consolidate each content area under a specific domain, and only the subtests that contain content related to the individual's educational concern should be administered. However, in order to calculate composite scores, multiple tests must be administered. The administration of multiple tests allows for a more in-depth understanding of an individual's strengths and weaknesses.

Overall, it is very useful for identifying specific learning disabilities, and preparing and evaluating academic programme plan. Additional features are as following:

- A score summery report providing grade equivalents, age equivalents, standard scores by age or grade, percentile ranks, plus derived scores for the written expression subtest and written language composite.
- Provides provile for both grade and age equivalents
- A profile for standard scores, based on age or grade norms
- The standard score difference for each pair of subtests

- A personalized narrative report describing the student's performance on each subtest and composite

Based on an extensive review of the test Taylor (1993) reported some findings which need careful consideration while generalizing the findings on this test. They are:

- The test is not suitable for emotionally disturbed children
- Its concurrent validity with other established achievement tests is low, particularly with higher age groups.
- Though standardized on people with intellectual disability, reading subtest leaves scope for other assessment procedures, particularly CRTs.
- It use with children having visual problems is limited
- Overall, this test has adequate reliability but limited validity.

2.5.10 Special Education: Use of CRTs, Construction, precautions to be taken for developement with reference to programming

The term criterion-referenced was firs coined in 1962 by Glaser and Klaus (1962) One of the first articles on the topic of criterion-referenced testing appeared in the 'American Psychologist' (Glaser 1963).Criterion-referenced tests and assessments are designed to measure student performance against a fixed set of predetermined criteria or learning standards—i.e., concise, written descriptions of what students are expected to know and be able to do at a specific stage of their education. In elementary and secondary education, criterion-referenced tests are used to evaluate whether students have learned a specific body of knowledge or acquired a specific skill set. For example, the curriculum taught in a course, academic program, or content area.If students perform at or above the established expectations—for example, by answering a certain percentage of questions correctly—they will pass the test, meet the expected standards, or be deemed "proficient." Given the wide range of individual differences in intellectual disability it is possible to know only that a child's performance is poorer that the rest of the others. As the essence of special education is to match the content and method of instruction to suit the needs of the individual, CRTs are preferred over Norm Referenced Tests (NRTs). However, there are also certain inherent problems in this approach. One needs to understand the scope, limitations, and construction of CRTs so that the very purpose of assessment for individualized programme planning could be realized.

Definition of CRTs:

Definitions are given by different scholars from time to time to explain the nature and uses of CRTs. Some of these explanations are as below:

According to Hoko J. Aaron :

"Criterion-Referenced Tests (CRTs) provide teachers with skill specific information concerning their students' academic development and thus enable teachers to effectively map out detailed instructional plans."

According to Majer R.F. (1967) :

"The CRT is an instructional strategy. This strategy assists an individual to learn something better than he would have learned it by himself."

According to W.J.Popham (1978) :

"A criterion-referenced test is used in ascertain an individual status with respect to a well-defined behavior domain."

According to W.J.Popham (1978) cited by R.K.Hambelton (1985) :

"Criterion-referenced tests are constructed to permit the interpretation of examinee test performance i : relation to a set ofwell-defined competencies. "

According to Ivens (1970) cited by Pritamsingh (1983) :

"A CRT is one that is compared of items keyed to a set of behavioural objectives."

According to Glaser & Nitka (1971) cited by Pritamsingh(1983) :

"A CRT is one that is deliberately constructed 10 yield measurement that are directly interpretable in terms o f specified performance standards."

Hambleton (1982) modified Popham's definition o f CRT and that modified definition is as below :

"A criterion-referenced test is constructed to assess the performance level o f examinee in relation to a set o f well-defined objectives (or competencies)."

The following are a few representative examples of how criterion-referenced tests and scores may be used:

- To determine whether students have learned expected knowledge and skills. If the criterion-referenced tests are used to make decisions about grade promotion or diploma eligibility, they would be considered "high-stakes tests."

- To determine if students have learning gaps or academic deficits that need to be addressed. For a related discussion, see formative assessment.
- To evaluate the effectiveness of a course, academic program, or learning experience by using "pre-tests" and "post-tests" to measure learning progress over the duration of the instructional period.
- To evaluate the effectiveness of teachers by factoring test results into job-performance evaluations. For a related discussion, see value-added measures.
- To measure progress toward the goals and objectives described in an "individualized education plan" for students with disabilities.
- To determine if a student or teacher is qualified to receive a license or certificate.
- To measure the academic achievement of students in a given state, usually for the purposes of comparing academic performance among schools and districts.
- To measure the academic achievement of students in a given country, usually for the purposes of comparing academic performance among nations. A few widely used examples of international-comparison tests include the Programme for International Student Assessment (PISA), the Progress in International Reading Literacy Study (PIRLS), and the Trends in International Mathematics and Science Study (TIMSS).

The Developmental Aspects of CRT

As CRT is a recent innovation particularly in India, a brief discussion, in due order, of theoretical aspects regarding the development and validation steps of CRT becomes necessary for the bet! er understand ig of the subject. It is from this point of view that each of the twelve steps advocated by Hambleton (1978, 1982, 1985) and explained in detail by Modi (1986, p.1-20) is briefly described one by one :

Preliminary Considerations

It is a common knowledge that a test developer has to give thought to certain points concerning a test before he/she starts to develop a test and to have a clear picture of the following aspects:

(a) test purpose ,

(b) specification of content area ;

(c) identification of the groups to be measured and

(d) identification of qualified staff.

The purpose of a test influences the appropriateness of the breadth of a domains If the purpose is to provide feedback, the coverage of all the units becomes necessary , if the purpose is to find out causes of recurring learning difficulties (diagnosis), the selection of content is based on common sources of learning errors and if the purpose is to assign grade or certify mastery, the coverage of the content is wider and items have a wide range of difficulty.

From the above-mentioned four aspects, (b) and (c) are self-explanatory.

The services of the subject-matter experts and evaluators become inevitable at the stage of domain specification, logical review and content validity. A test developer has to plan well in advance to secure the services of such experts who are well-versed in the subject and have a considerable experience of this nature.

Domain Specification

Domain specifications are important new development in CR Testing (Baker 1974; Millman 1974, Popham 1978, cited by Hambleton 1982). Hambleton's29 (1980) following remark in this connection is apt and appropriate.

"Well-defined objectives make the task of writing test items easier and improve the quality of test scoi-g interpretations. Item writing is easier because appropriate content is spelled out. The quality of test score interpretations is improved because of the clarity of the content or behavior domains to which test scores are referenced."

At this stage, a researcher has to obtain a completely clear picture of the content. It is at this stage that a researcher makes an analysis covering all the aspects of content in the form of skills and/or competencies. Teaching of which topic under which conditions brings about the expected changes in behavior of an examinee is described by each domain. After the specification of domain is done and written in objective form, it becomes necessary to get the objectives examined by the subject matter experts form tiw print of view of their appropriateness for the level for which they are meant.

Using as a basis the work of Popham (1978); Hambleton (1982) suggested that a domain specification might be divided into four parts:

(a) Description-a short, concise statement of the content and/or behaviors covered by the competency.

(b) Sample directions and test item-an example of the test directions and a model test item to measure the competency.

(c) Content limits-a detailed description of both the content and/or behaviors measured by the competency, as well as the structure and content of the item pool. (This section should be so clear tint items may be divided by reviewers into those items that meet the specifications and those items that do not.) Sometimes clarity is enhanced by also specifying areas which are not included in the content domain description.

(d) Response limits-a description of the kind of incorrect answer choices which must be prepared. The structure and content of the incorrect answers should be stated in as much detail as possible.

Items writing:

Domain specifications lead a researcher to generate items. There is a subjective element in item writing in NRT. Some of the leading pioneers in the field of CRT tried to make the domain specified and some others concentrated their attention on finding out item writing techniques which were capable of reducing subjectivity in item writing. Item writing in NRT was considered more as an art than as science before the theory proposed by Roid and Haladyna (1982) came into light. As this consideration of item writing is more of art and less of science, it becomes necessary to remove or reduce the subjectivity in item writing because the quality of a test is dependent on the quality of items.

Logical Review of Items

Every item written for a test is subject to certian forms of analysis to determine its adequacy to meet the intended purpose. Traditional item analysis was limited to estimating each item difficulty value and discrimination indices. With the advent of CR Testing, the need for two new types of item reviews has emerged : logical and empirical.

The logical review refers to the logical relatedness of items to their instructional intent. Logical review establishes content validity of CRT items. Hambleton (1981) mentioned a judgmental approach which is used to conduct logical review.

A test developer has to cirry out empirical review through the measurement of the examinees responses. There are three main approaches forthe empirical review :

(a) to examine the instructional sensitivity of the items;

(b) to examine the difficulty value and discrimination value of items according to the traditional method and

(c) to examine the quality of items through item characteristic curve theory.

A test developer has to adopt any one of :lese three approaches. The empirical review provides useful information for detecting 'bad' items. The aim of empirical review in CRT is to find out items which are not sensitive to instruction. The data obtained from the examinees response are used to evaluate the effectiveness of items in terms of whether they function in the manner in which they were intended.

Test Assembly:

After the items reviews, the final form of the test is prepared at this step of test assembly.

The following three factors should also be considered:

(a) the place where the final form of the test is to be administered ;

(b) the students to whom the final form of the test is to be administered and

(c) the physical facilities available at the schools where the final form of the test is to be administered.

Then in any of the above mentioned aspects, the revision, if found necessary, should be made on the strength of information available from the administration of pilot test.

Establishing psychometric properties:

Scope of test could only be understood by certain essential characteristics it possesses. Important among them are reliability and validity.

Reliability

The traditional co-relational estimates of reliability are quite inappropriate in case of CRT. Reliability indices for CRTs are identified and grouped into following three categories by Berk (1984) :

(a) threshhold loss function;

(b) square error loss function and

(c) domain score estimation.

A test developer has to adopt a particular reliability index suited to his/ her purpose.

It is re-commended by Hambleton et.al.(1976) that,

"If the purpose of the test is to classify examinees this mastery-non mastery states, a decision the aretic approach should be employed." Subkoviak, in his article contributed to "A Guide to Criterion-Referenced Test Construction" edited by Berk46 (1984) discussed the following five separate approaches for establishing the reliability of mastery-non mastery classification

(a) Carver's approach (1970),

(b) Swaminathan et.al. approach (1974),

(c) Huynh's approach (1976);

(d) Subkoviak's approach (1976);

(e) Marhsall and Haertal approach (1976).

A test developer has to adopt an appropriate approach and a specific index within that approach.

Validity

The worthiness or unworthiness of any test depends upon its validity and reliability. Validity and reliability are established on the basis of the scores obtained by the examinees at the final form. Validity refers to appropriateness of particular uses of scores obtained from a test and not to test itself (Linn 1980). The evidence of validity is much needed for the intended interpretation and use of any set of test scores. It is mentioned by American Psychological Association (APA) that the questions of validity are questions of what may properly be inferred form a test score. Hambleton (1984) also observes that the validity of any uses of the test scores will need to be established within a general framework that three components : content, construct and criterion related validity.

The content validity is determined by judging the representativeness of the test items of a specified domain of content. Two requirements for assessing content validity are (1) a clear statement of the content domain and (2) details about the sampling plan used in item selection. Note that when test scores are reported at the objective level the content validity of each sample of items measuring an objective must be assessed.

It is usually desirable to have items in a criterion-referenced test that are representative of the content specified in a domain sepcification. In fact, the set of items should be broadly representative of the content domain of interest. However, to date only in some highly special cases has it been possible to specify completely a pool of valid test items. For example, there have been some successes in the areas of reading, mathematics, and spelling. But the examples are far removed from the more complex content domains in the areas of geography, world history and English.

Consruction validation studies have not been common in criterion referenced measurement This may be because criterion-referenced test score distribution are often homogeneous (for example, it often happens that before instruction most individuals do poorly on a test and after instruction most individuals do well). Correlational methods do not work very well with homogeneous score distributions because of problems due to score range restrictions.

CRT literature is rich with a number of methods for establishing the validity. Hambleton, in his article contributed to "A Guide to Criterion-Referenced Test Construction" edited by Berk (1984)44, discussed the following five approaches for establishing validity

(a) Intra-objective approach,

(b) Inter-objective approach;

(c) Criterion-related approach;

(d) Experimental approach and

(e) Multitrait-multimethod approach

A test developer has to adopt a method or methods from one or more of these five approaches suitable to true intended purpose.

2.6 Introduction to existing Educational Assessment Tools

The earlier we have already illustrated the importance of criterion-referenced tools in assessment and programme planning in special education/training of persons with intellectual disability. There are several scales in India that are based on criterion-referenced approach but some of the commonly used scales are as following:

- Upanayan
- Arambh
- Indian adaptation of Portage Guide
- Madras Developmental Programming System (MDPS)
- **Behavioural Assessment Scales for Indian Children with Mental Retardation (BASIC-MR)**
- Functional Assessment Checklist for Programming (FACP)

2.6.1 Upanayan:Upanayan Developmental Programming System (UDPS) for Children with Intellectual Disability

Upanayan is a systematic, structure tool for early intervention programme for the training of children with developmental delays and/or intellectual disability. It was developed at Madhuram Narayan Centre for Exceptional Children, Madras, in 1987 . It is comprehensive, covering the management of children with intellectual disabilty in the age group of 0-2 years and 2-6 years to meet a 'felt need' for systematic training. Appropriate to Indian conditions and suited to the cultural milieu, the printed program comes equipped with a user manual and a set of activity cards.

Upanayan Early Intervention Developmental Programming System:

This System consists of background information form (Case history), the Upanayan checklist, profiles, evaluation formats – Graphical and Numerical, an assessment kit, activity cards, training materials and a user manual. The check list, covering the five areas of development from birth to 2 years, is arranged in the normal developmental sequence, comprising a total of 250 skills, 50 from each domain, such as, motor, self-help, language, cognition and socialization. The activity cards are colored differently for easy identification. The manual gives instructions on the use of the checklist and the activity cards and a list of materials to be used during assessment. In the Upanayan program, age 2 + to 6 years, the check list includes 50 skills in each of the selected 12 domains, a total of 600 skills. The domains are: communication, self-care meal time activities, personal daily activities, social activities, community use, self direction, health and safety, functional academics–writing, reading, arithmetic, leisure time and work. The manual includes instructions for use. The checklist and the activity cards containing suggested activities have been field tested extensively with parents, special educators and other professionals in different parts of the country.

2.6.2 Arambh

Arambh is apackage for inclusive education at preschool level was developed at the National Institute for the Empowerment of Persons with Intellectual Disability (Formerly known as National Institute for the Mentally Handicapped), Secunderabad(Rao & Narayan, 2000) with funding support from UNICEF. It provides a customized curriculum, instruction for adaptation in teaching method specific to each content and disability at preschool level This package is meant to provide early childhood special educational inputs between 3 to 6 years i.e. before entering into the school system, The package consists of the following:

- Curriculum calendar
- Teacher Manual
- Policy maker booklet
- Activity Cards

The curriculum calendar specifices what objectives of learning are to be involved in its monthly activities. Teacher manual helps the teacher to make programme plan in regular school so that the existing infrastructure and resources are well utilized. An information booklet for the policymakers is added to draw a roadmap for the inclusive model of covering the children with special needs. There are 225 activity cards to cover the knowledge required daily, and information for a child to interact with parents, family members and the community. The cards indicate the process of various activities through conversion, games,songs, story –telling, creativity and finally prepare the child for skill demonstration. Field studies indicate that this scale is being widely used in early childhood special education in India.

2.6.3 The Portage Guide to Early Education

Portage is the most recognized and used early intervention model in the world. '.Portage Basic Training Course for Early Stimulation of Pre-School Children in India' is an Indian adaptation as well as translation in Hindi of "Portage Guide to Early Education" by S.M.Bluma, M.Shearer, A.H.Frohman and Jean M.Hilliard (USA). It has also been translated in 9 Indian languages by CBR Network, Bangalore and is available in the form of CD. Portage guide is basically a system for teaching skills to pre-school children with developmental delays. The portage project is a home based

training system which directly involves parents in the education of their children in the early childhood ie., 0-6 years of age. The training is provided by a specially trained teacher or a public health worker with a special training and experience in the field of child development. However, the key person in the home based programme is parents/ family members.

It can be used by para-professionals like the staff of anganwadis, balwadis, non-professionals like parents, siblings, professionals such as pre-school educators, psychologists, and doctors.

This project is guided by the following four core values:

- Strength Based: a focus on the strengths of children, families and programme
- Ecological: considerations of the larger environment in which children, families and programs exist.
- Family Focussed: families and programs are the decision makers
- Relationship Based: most effective work is through relationship based upon trust that supports each individual and forms the basis of the program implementation. (CESA 5, 2003)

The portage checklist covers areas such as infant stimulation, self-help, motor, cognitive, language and socialization. In each area, the activities are listed in a sequential order corresponding to the age. In addition to the checklist, there are activity cards for each skill which explains the materials and procedure to be used to train the child. The checklist also provides age norms for each task on the margin which help the trainer to estimate the age equivalence of the child's functioning.

The first step is to check through the listed skills in all the areas and record the performance of the student against each skill under the column entry behavior. There is also the provision to mark date of achievement and remarks. A separate provision is made (Activity chart) to record activities, achievement and targets. As the format accommodates daily and weekly recording of progress, there is close monitoring. The checklist, activities and record formats are available in the form of a booklet in English and Hindi.

2.6.4 Madras Developmental Programming System (MDPS), 1975

This scale earlier known as " Madras Scale" was developed by Jeyachandran and Vimala (1968). It underwant three editions including a revision before it acquired its present from and the name, " Madras Developmental Programme System" (MDPS) in 1975. The scale was revised five more times till 1992. The scale is first of its kind in India in individualized programme planning in training process with intellectual disability. The scale consists of 360 observable and measurable items, grouped under 18 functional domains with each containing 20 items. The 18 domains encompass the following broad areas:

Motor Skills : (Gross motor, Fine motor activities)

Self-help Skills :(Eating, Dressing, Grooming, Toileting)

Comunication Skills: (Receptive and Expressive language)

Social interactions

Functional Academic Skills :(Reading, Writing, Numbers, Time, Money)

Domestic Behavior,

Community orientation,

Recreation and leisure time activities,

Vocational activities.

Scoring Process:

The child's performance on each item is rated from two directions, A or B, depending on whether the child does or does not perform the target behavior listed as an item on the scale or colour code ('Blue' means performs independently; 'Red' means yet to perform) can be used.

Some of the silent features of the scale are as following:

- Each domain lists twenty items in the developmental order, along the dependence-independence continuum.
- The MDPS also provides an Adaptive Behavioral Assessment of each child with Intellectual Disability.

- The MDPS system helps to record challenging behaviors (problem behavior) which can be taken care of through the IEP. A schedule for the management of challenging behaviors is also included.
- The administration procedure involves getting information regarding the skills and behaviors that the child can or cannot do currently.
- Information is derived through direct observation of the child, through parent/ caretakers' observations and by means of testing in simulated situations or through interviews.
- The data recorded/presented, graphically and/or numerically, at weekly, quarterly, and annual intervals, helps the teacher to set goals and draw behavior profiles of the assessed individual; it helps in the evaluation of a child's progress over a period of time.
- Once the assessment is completed, persons with Intellectual Disability, as per the design, will naturally fall into the educational classifications: pre-primary, primary, secondary, pre-vocational and vocational.
- The reliability and validity of this scale has been established.

2.6.5 Behavioural Assessment Scales for Indian Children with Mental Retardation (BASIC-MR)

It is an evaluation tool used to assess the overall performance of children with mental retardation. This scale was developed by Peshwaria and Venkatesan in 1992. BASIC MR The scale has been developed in two parts, BASIC MR, Part–A and BASIC MR, Part-B. • PART-A consists of 280 items grouped under seven domains— motor, activities of daily living (ADL), in motor, language, reading–writing, number, time, domestic, social and prevocational. PART-B consisting of 75 items grouped under 10 domains, that is, violent and destructive behaviors, temper tantrums, misbehavior with others, self-injurious behavior, repetitive behavior, odd behavior, hyperactive behavior, rebellious behavior, anti-social behavior, and fears, helps to assess the current level of problem behavior in the child, along a descriptive scale, namely, independent, cueing, verbal prompting, physical prompting, totally dependent and not applicable, each scale awarded a score of 5 to 0 in that order. Test administration of any item within any domain can be stopped after five consecutive failures by the child. The rest of the items

should be scored '0'. In such cases, maximum scores possible for the child in each of domain is 200. The child is rated on each item of PartB along a descriptive scale, namely, 0 for 'Never', 1 for 'Occasionally' and 2 for 'Frequently' based on three levels of severity and frequency.

2.6.6 Functional Assessment Checklist for Programming– (FACP) (Narayan, Myredi, Rao & Rajgopal, 1994)

This checklist is developed by the Department of Special Education, NIEPID, Secunderabad. There are separate checklists for different age group. Each of the seven checklists is addressed to different levels of the child's functioning, namely, pre-primary, primary-I, primary-II, secondary prevocational-I, pre-vocational-II and care group. At each level, selected carefully and written objectively, excepting care group, the checklists cover a broad domain of skills, such as, personal, social, academic, occupational and recreational. When a child achieves 80% success at a given level, promotion to the next higher level considered. Each item on the checklist is rated along a descriptive scale namely, yes (+) means the child performs the item with no help, occasionally cueing (OC), verbal prompting (VP), physical prompting (PP), no (-) meaning one has to completely support the child in the performance of the task.

Teaching goals and objectives set quarterly (once in three months) and the progress evaluated at the end of each quarter, the checklist provides for periodic evaluation. This checklist has a high correlation with the Madras Developmental Programming System.

2.7 Implications of the above for Inclusion

Inclusive Education and Assessment

The Individuals with Disabilities Act Amendments of 1997 (IDEA 97) defines inclusion as the participation of children and youth with disabilities in the general education classroom and the general curriculum with appropriate aids and services.

Inclusion means full inclusion of children with diverse abilities (that is, both giftedness and disabilities) in all aspects of schooling that other children are able to access and enjoy. It involves 'regular' schools and classroom genuinely adapting adn changing to meet the needs of all children as well as celebrating and valuing differences (Loreman and Deppeler 2001).

The related concept of full inclusion refers to full membership in the general classroom with the full supports necessary to make inclusion successful (Sailor et al., 1993). The term full supports describes the importance of providing necessary support services in general education classrooms to ensure a quality educational programme.

Despite the very different starting points and issues facing countries, all are working towards using assessment as a facilitator rather than a barrier to inclusion. Furthermore, all countries are debating ways of making their systems of assessment genuinely more inclusive for pupils with different SEN. Adapting mainstream assessment procedures is the focus of a lot of attention and there is a move in countries towards 'universal assessment', where assessment materials are planned and designed to be accessible to the widest possible range of pupils without the need for further modification at later stages of their use. However, it is clear that there is a broader concept that is emerging in countries that needs to be understood - that of inclusive assessment. Inclusive assessment refers to an approach to assessment in mainstream settings where policy and practice are designed to promote the learning of all pupils as far as possible. The overall goal of inclusive assessment is that all assessment policies and procedures should support and enhance the successful inclusion and participation of all pupils vulnerable to exclusion, including those with SEN.

The principles underpinning inclusive assessment

- All assessment procedures should be used to inform and promote learning for all pupils;
- All pupils should be entitled to be part of all assessment procedures;
- The needs of pupils with SEN should be considered and accounted for within all general as well as SEN specific assessment policies;
- All assessment procedures should be complementary and inform each other;
- All assessment procedures should aim to 'celebrate' diversity by identifying and valuing all pupils' individual learning progress and achievements;
- Inclusive assessment explicitly aims to prevent segregation by avoiding - as far as possible - forms of labelling and by focusing on learning and teaching practice that promotes inclusion in a mainstream setting.

The focus of inclusive assessment –

- The purpose of inclusive assessment should be to improve learning for all pupils in mainstream settings;
- All assessment procedures, methods and tools should inform teaching and learning and support teachers in their work;
- Inclusive assessment may include a range of assessment procedures that fulfill other purposes in addition to informing teaching and learning. These purposes may be related to summative assessment, initial identification of SEN, or monitoring of educational standards. All these procedures should aim to inform learning, but the procedures should also be 'fit for purpose'. That is the methods and procedures should only be used for the reason they were designed for and not used for others purposes.

Why do we modify assessment for students with disabilities in inclusive settings?

- Experts expect that inclusion will result in school classrooms composed of much more diverse groups of students (Putnam et al., 1995). As a result teachers need to develop new instructional methodologies and assessment procedures that respond to the greater diversity of student needs.
- Although assessment in inclusive settings requires changes, many current evaluation practices work equally well in inclusive and noninclusive educational settings. For eg. Many curriculum based assessment procedures such as teacher made testing, grading of homework assignments, grading of classwork already occur in the same way in most classrooms. In fact, teachers should use established assessment procedures whenever possible as long as they meet the increasingly diverse needs of the students.

The methods used in inclusive assessment

- Inclusive assessment involves a range of possible methods and strategies to assessing pupils. The key point about all these possible approaches is that they all work to gather clear evidence about pupils' learning;
- Inclusive assessment methods report on the product or outcomes of learning, but also provide teachers with information on how to develop and improve the process of learning for an individual pupil or groups of pupils in the future;

- Decision-making based upon inclusive assessment draws upon a range of sources that are action based and presents evidence of learning collected over a period of time (and not snapshot, one off assessment information);
- A wide range of assessment methods are necessary in inclusive assessment in order to make sure that there is a wide coverage of areas (non-academic as well as academic subjects) assessed; - Assessment methods should aim to provide 'value added information' on pupil's learning progress and development, not just snapshot information;
- Any assessment information should be contextualised and the educational environment as well as any home-based or environmental factors that influence a pupil's learning should be taken into account;
- Inclusive assessment should extend to assessing the factors that support inclusion for an individual pupil in order that wider school, class management and support decisions can be effectively made.

The people involved in inclusive assessment

- Inclusive assessment involves the active involvement of class teachers, pupils, parents, class peers and others as potential assessors, or participants in the assessment process;
- The procedures used in inclusive assessment should be developed based upon shared concepts and values for assessment and inclusion as well as the principles of participation and collaboration between the different stakeholders in assessment;
- Any assessment should aim to be empowering for the pupil concerned by providing them with insights into their own learning as well as a source of motivation to encourage their future learning;
- All pupils are entitled to be part of inclusive assessment - pupils with SEN as well as their classmates and peers.
- Inclusive assessment can be considered to be an important aim for all educational policy makers and practitioners. However, inclusive assessment can only be realised within an appropriate policy framework and with the appropriate organisation of schools and support to teachers who themselves need to have a positive attitude towards inclusion.

New approaches to assessment in inclusive settings

Team assessment:

One of the most useful assessment approaches in inclusive classroom is team assessment, which is a process that involves all teachers in the evaluation process, not just special education teachers in particular who concern about testing and grading students with disabilities are.

- Successful inclusion depends in part on the willingness of teachers to modify their measurement procedures are all different (Tiegerman-Farber & Radziewicz, 1998).
- If most of the teachers are willing to collaborate as coteachers in developing and implementing new assessment techniques that benefit all students while accommodating the needs of students with disabilities.
- One of the team assessment elements that teachers should consider is how well the members of the assessment team work together.
- Active participation of all team members in gathering and interpreting assessment data is a key element. All the team members should help interpret assessment data. The benefit of team assessment is more complete evaluation of student needs within the most appropriate educational environment.
- Team assessment requires a substantial amount of time, professional commitment and interpersonal communication (Coufal, 1993).

Cooperative learning assessment

Cooperative learning is an instructional strategy that works well in inclusive settings. Research studies by Pomplan (1997) and Carlson et al. (1988) provide further evidence to support the use of cooperative learning in inclusive classrooms. These studies suggest that nonroutine, open ended tasks maximize the participation of students with disabilities in heterogeneous cooperative groups.

Peer assessment of class presentation:

Any activity done by a student can be evaluated by peers as well as the teacher. One way to encourage group interdependence and to foster peer assessment is to structure classroom activities / presentations so that all members must learn the activity / material being presented.

The rating system should include items for assessing the quality of the presentation, the interest generated by the presentation, the organization, creativity, originality and peer participation.

Group assessment:

In real life the success of an organization many a time depends upon the team performance rather than the success of an individual. For this reason, cooperative learning assignments in school should require group reports, exhibits, performances and presentations in which the students work together and are graded as a group. Group celebration should occur at the end cooperative learning lessons after completion of assessment and grading. Group celebrations give students the opportunity to salute their success and reflect on how well they collaborated to achieve their learning goals. Recognizing the learning efforts of group members and their contribution to the learning of others is an important element in rewarding group interdependence.

Peer tutoring assessment:

Peer tutoring is an instructional strategy in which a student tutor teaches another student in a tutor-tutee relationship designed to promote academic learning and social skill development. Successful peer tutoring involves planning, tutor training, teacher support and assessment. Some teachers assess the progress of tutees by having complete daily progress sheets.

Play-Based assessment:

This method is highly recommended for assessing all the developmental areas and there is a highly likelihood that the child will demonstrate his / her true abilities in this setting. Play-Based assessment yield information to develop a plan for intervention to make the recommendations for goals or out-comes for the child and family and assessment team. There are specific play assessment instruments that might be used by the practitioner. Eg.- *play observation scale* (Rogers, 1986) which describes a 10-step hierarchy that focuses on language, cognitive and social aspects of play.

Portfolios and assessment:

A student portfolio is a systematic collection of student work and related material that depicts a student's activities, accomplishments and achievements in one or more school subjects. It is an ongoing process that captures the many activities and

accomplishments associated with reflective teaching and learning that occur in portfolio-based instruction. By evaluating progress using a collection of authentic samples of student work, portfolio assessment provides an ongoing record of student performance and mastery of specific competencies (Vavrus, 1990).

2.8 Let us Sum up

Screening helps in checking and shorting the children with disabilities. Identification on ID children at very early state is essential to develop an intervention programme for them and appropriate refusals should be maintained to complete the intervention. Screening can be carried out at different stages- prenatal, natal, neonatal and post natal. Neonatal and post natal screening is very essential for early identification and intervention. Understanding the child from behavioural, medical, therapeutic and psychological viewpoints is necessary to develop a comprehensive training programme. Identification is a process of confirming the diagnosis of a condition. Identification of intellectual disability is a very crucial aspect of rehabilitation process. Proper identification and diagnosis are the basis for intervention. Wrong diagnosis may lead to inappropriate services or deprivation of services for the needy children.

ID is a developmental disorder that affects general intellectual functioning and adaptive behaviors. It has no definite cause, but has multiple risk factors including genetic, biological, and environmental factors. Depending on the severity of the condition and the underlying etiological processes, ID can also present with comorbid conditions. It is important to identify the treatable conditions and treat the same. Special attention should be paid to psychiatric and behavioral disorders, which are common in ID and cause stigma, caregiver burden, and need for medication and segregation. Since ID causes disability, appropriate measures should be taken to certify disability and guide the families for appropriate support systems including the social benefits.

Assessment is an each child with intellectual disability is unique in nature. Special education can identify the unique need of each child through proper assessment and plan intervention activities as per the requirement. Assessment is a pivotal and the first step of rehabilitation programme for the children with intellectual disability. Assessment is collection and organization of information for making administrative and instructional decisions.

There are different types of assessment. Based upon the manner of data collection it is formal and informal assessment and based upon the construction of test assessment could be Norm Referenced Assessment (Test) (NRT) and Criterion Referenced Assessment (Test) (CRT). NRT helps more in administrative decisions whereas the CRT helps more in instructional purpose. Assessment will utilize several methods ranging from observation to testing and experimentation. Observation is the most inexpensive method. Testing and clinical investigations are relatively costly and provide more objective information. Sometimes, external tools such as screening measures, schedules and scales are necessary to conduct assessment.

Most of the psychological test such as Developmental Test, Intelligence Test and Aptitude Test are NRT in nature whereas most of the behavioural scale used in Special Education is CRT in nature.

The different areas of assessment are clinical assessment, psychological assessment, educational assessment behavioural assessment and ecological assessment. Psychological assessment is the process of systematic collection, organization and interpretation of information about a persons and his situation. It encompasses assessment of the three major aspects of the mind namely, cognition, conation and affection.

Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with the environment. Intelligence tests, developmental schedules and adaptive behavioural scales are used in measuring the intelligence. Educational assessment helps to find out abilities of the student and plan teaching programme accordingly. Norm referenced tests and criterion referenced tests are used in educational assessment. Behavioural assessment is systematic repeated recording of predefined behavioural parameters of individuals, with a purpose of either identifying functional stimuli that maintain certain behaviours or demonstrating systematic behavioural changes as a function of planned intervention.

One of the main aims of educational assessment in intellectual disability is to plan a programme that is individualized. In this context, CRTs are very useful for they provide the student perform skill without any reference to the others. If chosen to construct CRTs, adequate attention must be given to select the criterion to judge skill achievement. Specific guidelines are in place, which will help us selecting the criterion. The scope of CRTs can be enhanced by establishing the reliability and validity by following specific methods. Irrespective their applicability in special education, CRTs will not make NRTs

redundant, as both have different assumptions and utilizes. In India there are several valid, reliable CRTs from preschool level to the pre-vocational level. Six categories of tests are discussed which are Arambh, Indian adaptation of Portage Guide, Madras Developmental Programming System (MDPS), Behavioural Assessment Scales for Indian Children with Mental Retardation (BASIC-MR), Functional Assessment Checklist for Programming (FACP).

Inclusive assessment explicitly aims to prevent segregation by avoiding - as far as possible - forms of labeling and by focusing on learning and teaching practice that promotes inclusion in a mainstream setting. Inclusive assessment may include a range of assessment procedures that fulfill other purposes in addition to informing teaching and learning. These purposes may be related to summative assessment, initial identification of SEN, or monitoring of educational standards. All these procedures should aim to inform learning, but the procedures should also be 'fit for purpose'. That is the methods and procedures should only be used for the reason they were designed for and not used for others purposes.

2.9 Unit end exercise

- Name some screening tools used in India in the context of identification of intellectual disability.
- Make a plan of identification of children with ID in a primary school.
- Describe how intelligence and adaptive behaviour assessment are important in ID.
- Explain how the nature of CRTs varies with the target group
- Explain the scales you will use both for individualized programming and group teaching with rationale and appropriate examples.
- Why assessment of adaptive behaviour is necessary in conceptualizing and programme planning in ID.

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The End

Unit – 3 □ Identification of Needs

Structure

3.1 Introduction

Each period in the life span is characterized by certain developmental phenomena that distinguish it from the periods that precede and follow it. Infancy is the early period of existence; the infants need to make some major adjustments to exist in the new environment outside the mother's body.

After infancy **babyhood** occupies the first two years of life. It is the true foundation age; a time of rapid growth and change and of decreased dependency; a time of increased individuality and the beginning of socialization.

Early childhood begins at the conclusion of babyhood – the age when dependency is practically a thing of the past and being replaced by growing independence and ends at about the time the child enters first grade in school.

Early intervention means identifying and providing effective early support to children and young people who are at risk. Effective early intervention works to prevent problems occurring or to tackle them lead on when they do, before problems get worse.

In early intervention- support is also given to a family when any relevant problem first emerges**. Parents** play a crucial role in their child's early intervention programme.

School age refers to the age range of children normally attending school.

A special school is a school catering for students who have special educational needs.

Resource rooms are learning spaces where a special education teacher instructs and assists students identified with a disability. These classrooms are staffed by special education teachers and sometimes paraprofessionals.

An inclusive classroom is a general education classroom in which students with and without disabilities learns together.

Multidisciplinary Team is a team approach, including the integration of values, perspective, and ideas that gives an accurate decision-making process in identifying the academic, social, and vocational needs of the child to develop an individualized educational program that will meet the needs of that child with disability.

Transition services are a coordinated set of activities for a student with disabilities designed within an outcome oriented process. It promotes movement from school to post school activities.

Individualized Transition Plan focus mainly on Job analysis, Job matching and job training of persons with disabilities / special needs.

Vocational skills for special education is designed to prepare students for life beyond the classroom setting. The teaching of vocational skills is intended to set up the student for success after secondary education.

In recent years various **employment models** have emerged. They are - Competitive employment, sheltered employment, supported employment and self employment.

During the past decade there has been a noticeable increase in the number and types of occupations of the qualified special need person.

Proper placement can play up the skills and play down the difficulties.

Follow up is a continuation or repetition of something that has already been started or done. The agency which referred the worker with intellectual impairment to an employer should be able to furnish follow-up service or guidance.

Inclusion in education refers to a model wherein students with special needs spend most or all of their time with non-special (general education) needs students. It arise in the context of special education with an individualized education program and is built on the notion that it is more effective for students with special needs to have said mixed experience for them to be more successful in social interactions leading to further success in life.

3.2. Objectives

After going through this unit, you will be able to:

- describe the main features of infancy, babyhood and early childhood
- explain the purpose and necessity of Early Intervention and the need of family involvement in this regard
- describe the school age, along with other placement alternatives such as special school, resource room and inclusive classroom
- demonstrate knowledge and information regarding multi disciplinary team collaboration and the role of special education teacher along with other service providers
- demonstrate knowledge and information regarding Transition and career development and the need & importance of Individualized Transition Plan

- state the importance and different aspects of vocational development
- enlist the models of employment along with the knowledge of emerging job opportunity, placement and follow up
- state the implication of the above for inclusion.

3.3 Main Body of First Sub-unit

3.3.1. Infancy, babyhood and early childhood –

The word infant suggests extreme helplessness; it is the early period of existence. During this period, the newborn's complete helplessness gradually gives way to increasing independence.

Characteristics of infancy

Infancy is the shortest of all developmental periods

Infancy begins with birth and ends when the infant is approximately two weeks old, by far the shortest of all developmental periods. It is the time when the fetus must adjust to life outside the uterine walls of the mother where it has lived for approximately nine months.

BOX 3-1

Subdivisions of Infancy

Period of the Partunate (from birth to fifteen to thirty minutes after birth). This period begins when the fetal body has emerged from the mother's body and lasts until the umbilical cord has been cut and tied. Until this is done, the infant continues to be a parasite and makes no adjustments to the postnatal environment - the environment outside the mother's body.

Period of the Neonate (from the cutting and tying of the umbilical cord to approximately the end of the second week of postnatal life). The infant is now a separate, independent individual and is no longer a parasite. During this period, the infant must make adjustments to the new environment outside the mother's body.

Infancy is a time of radical adjustments

Although the human life span legally begins at the moment of birth, birth is merely an interruption of the developmental pattern that started at the moment of conception. It is the graduation from an internal to an external environment. Like all graduations, it requires adjustments on the individual's part. It may be easy for some infants to make these adjustments but so difficult for others that they will fail to do so.

Infancy is a plateau in development

The rapid growth and development which took place during the prenatal period suddenly come to a stop with birth. In fact, there is often a slight regression, such as loss of weight and a tendency to be less strong and healthy than at birth. Normally this slight regression lasts for several days to a week, after which the infant begins to improve. By the end of the infancy period, the infant's state of development is usually backed to where it was at the time of birth.

Infancy is a preview of later development

It is not possible to predict with even reasonable accuracy what the individual's future development will be on the basis of the development apparent at birth. However, the newborn's development provides a clue as to what to expect later on.

BOX 3-2

Adjustments of infancy

Temperature Changes

There is a constant temperature of 100oF in the uterine sac, while temperatures in the hospital or home may vary from 60 to 70oF.

Breathing

When the umbilical cord is cut, infants must begin to breathe on their own.

Sucking and swallowing

The infant must now get nourishment by sucking and swallowing, instead of receiving it through the umbilical cord. These reflexes are imperfectly developed at birth, and the infant often gets less nourishment than is needed and thus loses weight.

Elimination

The infant's organs of elimination begin to work soon after birth; formerly, waste products were eliminated through the umbilical cord.

Infancy is a hazardous period

Infancy is a hazardous period because of the difficulties of making the necessary radical adjustments to the totally new and different environment. The high infant mortality rate is evidence of this.

CONDITIONS INFLUENCING ADJUSTMENT TO POSTNATAL LIFE

Many conditions influence the success with which infants make the necessary adjustments to postnatal life. The most important of these, as research to date indicates, are the kind of prenatal environment, the type of birth and experiences associated with it, the length of the gestation period, parental attitudes, and postnatal care.

Needs of Infant

Mass Activity

Mass activity occurs throughout the entire body when any area is stimulated, though the activity is most pronounced in the stimulated area.

Specific Activities

Specific activities involve certain limited areas of the body. They include reflexes, which are definite responses to specific sensory stimuli and which remain unchanged with repetition of the same stimulus, and generalized responses, which use larger groups of muscles than are involved in reflexes and which may be aroused by either external or internal stimuli.

Box 3-3

SENSORY CAPACITIES OF INFANTS

Vision

Newborn infants are far from blind but their visual field is only about one-half that of adults because the rods are undeveloped except around the fovea.

Hearing

It is believed that hearing is the least developed of all the senses at birth partly because the stoppage of the middle ear with amniotic fluid for several days after birth makes it impossible for sound waves to penetrate to the inner ear where the cells for hearing are located and partly because cells are partially developed.

Smell

The cells for smell, located in the upper part of the nose, are well developed at birth.

Taste

Because taste is markedly influenced by smell and because the cells for taste, located on the surface of the tongue and in the cheek areas, are well developed, the infant's sense of taste is keen.

Organic Sensitivities

Sensitivity to hunger is fully developed at birth and hunger contractions occur within the first day of life. Thirst also appears then.

Skin Sensitivities

The sense organs for touch, pressure, and temperature are well developed at birth and lie close to the surface of the skin.

Babyhood - Babyhood occupies the first two years of life following the brief two-week period of infancy.

During the babyhood months, there is a gradual but pronounced decrease in helplessness. This does not mean that helplessness quickly disappears and is replaced by independence. Instead, it means that every day, week, and month the individual becomes more independent so that, when babyhood ends with the second birthday, the individual is a quite different person than when babyhood began.

CHARACTERISTICS OF BABYHOOD

Certain characteristics of babyhood distinguish it from the periods preceding it and those that follow it.

Babyhood is the True Foundation Age - Patterns established early in life persist regardless of whether they are good or bad, if an undesirable pattern of behavior or unfavorable beliefs and attitudes have started to develop, the sooner they can be corrected the easier it will be for the child. Early foundations quickly develop into habits through repetition and they will have a lifelong influence on a child's personal and social adjustments.

Babyhood is an Age of Rapid Growth and Change - Babies grow rapidly, both physically and psychologically. With this rapid growth comes a change not only in appearance but also in capacities. Intellectual growth and change parallel physical growth and change.

Babyhood is an Age of Decreasing dependency - The decrease in dependency on other results from the rapid development of body control which enables babies to sit, stand and walk and to manipulate objects. The random, mass movements of the infant give way to coordinated movements, which make it possible for babies to do things for themselves which formerly they had to rely upon others to do for them. Independence also increases as babies become able to communicate their needs to others.

Babyhood Is the Beginning of Socialization - Babies show their desire to become a part of the social group by putting up protests when they are left alone for any length of time and by trying to win the attention of others in any way they can.

Babyhood is the beginning of Sex-Role Typing - Almost from the moment of birth, boys are treated as boys and girls as girls. Boys, for example, are dressed in blue clothes, covered with blue blankets, and live in a room that lacks the frills and ruffles of a girl's room. Toys are selected that are appropriate for boys and they are told stories about boys and their activities. The same sex-identifying traditions apply to girls.

PATTERN OF PHYSICAL DEVELOPMENT DURING BABYHOOD

Weight - At the age of two, baby weight 25 pounds, increase in weight during babyhood comes mainly from an increase in fat tissue.

Height - the baby measures at two years, between 32 and 34 inches.

Physical Proportions - Head growth slows down in babyhood, while trunk and limb growth increases.

Bones - The number of bones increases during babyhood.

Muscles and Fat - Muscle fibers grow slowly during babyhood and are weak. By contrast, fat tissue develops rapidly during babyhood.

Teeth - The average baby has four to six of the twenty temporary teeth by the age of one.

Sense Organ Development - By the age of three months, the eye muscles are well-enough coordinated to enable babies to see things clearly and distinctly and the cones are well-enough developed to enable them to see colours.

SPEECH DEVELOPMENT

Both aspects of communication - comprehension of what others are trying to communicate and the ability to communicate one's thoughts and feelings to others in terms they can understand - are difficult and not mastered quickly. However, the foundations for both are laid during the babyhood years, though the ability to comprehend is generally greater when babyhood comes to a close than is the ability to speak.

The speaker's facial expression, tone of voice and gestures help babies to understand what is being said to them.

Many babies during the first and the second years of their lives, try to make known their needs and wants by these means. These substitute forms of communication are known as "Pre-speech forms".

Four pre-speech forms normally appear in the developmental pattern of learning to talk: crying, babbling, gesturing and the use of emotional expressions.

EMOTIONAL DEVELOPMENT

There are two distinctive characteristics of babyhood emotions. First, they differ markedly from those of adolescents and adults and often from those of older children.

Second, emotions are more easily conditioned during babyhood than at later ages.

Common emotional patterns in Babyhood

Anger - Typically, the anger response takes the form of screaming, kicking anything within reach. During the second year, babies may also jump up and down, throw themselves on the floor.

Fear - The typical fear response in babyhood consists of an attempt to withdraw from the frightening stimulus accompanied by crying, temporary holding of the breath.

Curiosity - Young babies express curiosity mainly through their facial expressions - tensing the facial muscles, opening the mouth, and protruding the tongue.

Joy - They express their pleasure or joy by smiling, laughing and moving their arms and legs and all bodily movements are intensified.

Affection

Typically, babies express their affection by hugging, patting and kissing the loved object or person.

SOCIAL RESPONSES

Two to three months - Babies can distinguish people from inanimate objects. At this age, babies show no preference for any one person.

Four to Five Months - They react differently to scolding and to smiling faces and to friendly and angry voices.

Six to Seven Months - Babies become strongly attached to their mothers or mother-substitutes

Eight to nine months - The baby attempts to imitate the speech, gestures, and simple acts of others.

Twelve months - The baby reacts to the warning "no-no."

Sixteen to Eighteen months - Negativism, in the form of stubborn resistance to requests or demands from adults, is manifested in physical withdrawal or angry outbursts.

Twenty-two to twenty-four months - The baby cooperates in a number of routine activities, such as being dressed, fed, and bathed.

Early Childhood - Childhood begins when the relative dependency of babyhood is over, at approximately the age of two years, and extends to the time when the child becomes sexually mature, at approximately thirteen years for the average girl and fourteen years for the average boy.

Today it is widely recognized that childhood should be subdivided into two separate periods - early and late childhood. Early childhood extends from two to six years, and late childhood extends from six to the time the child becomes sexually mature.

Developmental tasks of early childhood -

Box 3.4

PHYSICAL DEVELOPMENT IN EARLY CHILDHOOD

Height - The average annual increase in height is three inches. By the age of six, the average child measures 46.6 inches.

Weight - The average annual increase in weight is 3 to 5 pounds. At age six, children should weigh approximately seven times as much as they did at birth

Body proportions - Body proportions change markedly, and the "baby look" disappears.

Bones and Muscles - The bones ossify at different rates in different parts of body following the laws of developmental direction. The muscles become larger, stronger and heavier.

Teeth - During the first four to six months of early childhood, the last four baby teeth erupt. During the last half year of early childhood, the baby teeth begin to be replaced by permanent teeth.

Box 3.5

TASKS INVOLVED IN LEARNING TO SPEAK IN EARLY CHILDHOOD

Pronunciation of Words - Certain sounds and sound combinations are especially difficult for a young child to learn to pronounce, such as the consonants z, w, d, s, and g and the consonant combinations st, str, dr, and fl. Listening to radio and television can be an aid in learning correct pronunciation.

Vocabulary Building - Young children's vocabularies increase rapidly as they learn new words and new meanings for old words.

Forming Sentences - Three-or four word sentences are used as early as two years of age and commonly at three. Many of these sentences are incomplete, consisting mainly of nouns and lacking verbs, prepositions and conjunctions. After age three, the child forms six-to eight-word sentences containing all parts of speech.

Box 3-6

COMMON EMOTIONS OF EARLY CHILDHOOD

Anger - The most common causes of anger in young children are conflicts over playthings, the thwarting of wishes.

Children express anger through temper tantrums, characterized by crying screaming, Kicking, jumping up and down.

Fear - Conditioning, imitation, memories of unpleasant experiences play important roles in arousing fears. At first, a child's response to fear is panic; later responses become more specific and include running away and hiding, crying and avoiding frightening situation.

Jealousy - Young children become jealous when they think parental interest and attention are shifting toward someone else in the family, usually a new sibling. Young children may openly express their jealousy or they may show it by reverting to infantile behavior, such as bed-wetting, pretending to be ill, or being generally naughty. All such behavior is a bid for attention.

Curiosity - Children are curious about anything new that they see and also about their own bodies and the bodies of others. Their first responses to curiosity take the form of sensorimotor exploration; later as a result of social pressures and punishment, they respond by asking questions.

Joy - They express their joy by smiling and laughing, clapping their hands, jumping up and down, or hugging the object or person that has made them happy.

Grief - Young children are saddened by the loss of anything they love or that is important to them, whether it be a person, a pet, or an inanimate object, such as a toy. Typically, they express their grief by crying and by losing interest in their normal activities, including eating.

Affection - Young children learn to love the people, pets, or objects - that give them pleasure. They express their affection verbally as they grow older but, while they are still young they express it physically by hugging, patting and kissing the object of their affection.

Box 3.7

SOCIAL AND UNSOCIAL BEHAVIOUR PATTERNS

Social Patterns

Imitation - To identify themselves with the group, children imitate the attitudes and behavior of a person whom they admire and want to be like.

Cooperation - By the end of the third year, cooperative play and group activities begin to develop and increase in both frequency and duration as the child's opportunities for play with other children increase.

Sympathy - Because sympathy requires an understanding of the feelings and emotions of others, it appears only occasionally before the third year. The more play contacts the child has, the sooner sympathy will develop.

Empathy - Like sympathy, empathy requires an understanding of the feelings and emotions of others but, in addition, it requires the ability to imagine oneself in the place of the other person. Relatively few children are able to do this until early childhood ends.

Social Approval - As early childhood draws to a close, peer approval becomes more important than adult approval. Young children find that naughty and disturbing behavior is a way of winning peer approval.

Sharing - Young children discover, from experiences with others, that one way to win social approval is to share what they have - especially toys - with others. Generosity then gradually replaces selfishness.

Attachment Behaviour - Young children, who, as babies, discovered the satisfaction that comes from warm, close, personal associations with others, gradually attach their affection to people outside the home, such as a nursery school teacher, or to some inanimate object, such as a favorite toy or even a blanket. These then become what are known as attachment objects.

Unsocial Patterns

Negativism - Negativism, or resistance to adult authority, reaches its peak between three and four years of age and then declines. Physical resistance gradually gives way to verbal resistance and pretending not to hear or understand requests.

Aggressiveness - Aggressiveness increases between the ages of two and four and then declines. Physical attacks begin to be replaced by verbal attacks in the form of name - calling, tattling or blaming others.

Ascendant behavior - Ascendant behavior, or "bossiness", begins around the age of three and increases as opportunities for social contacts increase. Girls tend to be bossier than boys.

Selfishness - While young children's social horizons are limited mainly to the home, they are often selfish and egocentric. As their social horizons broaden, selfishness gradually wanes but generosity is still very undeveloped.

Egocentrism - Like selfishness, egocentrism is gradually replaced by an interest in and concern for others. How soon this change will occur will depend on how many contacts young children have with people outside the home and how anxious they are to win their acceptance.

Destructiveness - A common accompaniment of temper outbursts in young children is destroying anything within their reach, whether their own or someone else's possessions. The angrier they are, the more widespread their destructiveness.

Sex Antagonism - Until they are four years old, boys and girls play together harmoniously. After that, boys come under social pressures that lead them to shun play activities that might be regarded as "sissyish". Many engage in aggressive behavior which antagonizes girls.

3.3.2 Early intervention and Family involvement (NIMH—Family Based Programme Plan

Early intervention means identifying and providing effective early support to children who are at risk of poor outcomes. Effective early intervention works to prevent problems occurring, or to tackle them head-on when they do, before problems get worse. Early intervention services can change a child's developmental path and improve outcomes for children, families, and communities. Families benefit from early intervention by being able to better meet their children's needs from an early age and throughout their lives. Early intervention can help children and young people to develop the skills they need to live happy, healthy and successful lives. It can improve the quality of children's home lives and family relationships, increase educational attainment and support good mental health.

Development of early childhood care and intervention: The National policy of Education (NPE) has given a great deal of importance to early childhood Care an Education (ECCE). It specifically forced on the need for early care and stimulation of children belonging to the vulnerable sector of deprived community.

Emphasis has been given to establishing linkages between:

i) Integrated Child Development Services (ICDS) and other ECCE programme.

ii) Scheme of assistance to voluntary organization for conducting ECCE centers.

iii) Balwadis and Daycare centers run by voluntary agencies with government assistance.

iv) Pre-primary school / Anganwadis.

v) Maternal and child Health Services through PHC / Sub-centers.

The ECCE involves the total development of the child i.e. physical motor, cognitive, language, emotional, social and moral. The age span under consideration in ECCE is from conception to about to 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 anemia, immunization for prevention of tetanus following delivery etc.) hygienic and skilled birth attendance, nutritional care, early childhood stimulation, and health and nutritional support through.

The institution of family is considered essential for the existence of society. Family serves as a shock absorber in times of crises and stress. On the other hand family itself can precipitate conflicts and generate stress amongst the family members. Community and Parental participation are enlisted wherever possible in resource mobilization, planning and implementation.

Interventions seem to be successful at promoting development only when they help parents interact more responsively with their children.

Besides strengthening existing programme, emphasis is given for evolving low cost and context specific models.

- Home-based model: - (From conception to 6 years) - Parental training and foster child development.

- Training of local women for home visits for conducting stimulation programme. Low cost play materials.

Day-care centers: - (from birth to 6 years)

- To make free the working mothers and older children particularly at work sites family day-care centers.
- Where a day-care center is not available, a home care worker for 5 to 6 children support is provided.

Intervention: - A child with developmental challenges needs an individualized programme taking into account the family needs, preferences and supports. Family priorities are best satisfied with every member of the intervention team i.e. the special educator, the parent or caregiver and the members of the interdisciplinary team of experts knowing what the priorities are, and working in co-ordination and collaboration.

A child with special need is one who "has special need intellectually, physically, socially, or emotionally so markedly from what is considered to be normal growth and development that he (she) cannot receive maximum benefit from a regular school programme and requires a special class or supplementary instruction and services". An early intervention programme for such services shall:

- Consist of valuable material gathered from traditional resources, current practices and research, shared experiences of experts from firsthand knowledge - all of which chronicled, sorted, analyzed, giving only the relevant and accurate information in the field.
- Address the special needs of children with, or at risk for developmental problems and the needs of the family members for these children.
- Pertain to sensitive and critical periods in early human development.
- Specify guidelines and techniques to address children with special needs to early interventionist (parents / caregivers / special educators), service providers (Government / Non-government), Legislators and administrators.

Family involvement and Community Participation - a basis for developing interventions and providing this rich resource:

- Family involvement does not mean just providing the members with information and training them to become substitute therapists for their children :

- Accepting the family and the child alone as the focus of the services.
- Accommodating the family in letting them participate in defining goals and objectives to be set for the child in the training process.
- Forming partnership with families as collective resources.
- Identifying the unique identities of each family, culturally and socially and allow a free flow of ideas, innovations.
- Recognizing and understanding the strain, financial, psychological and social. The dynamics of adjustments that have a bearing on the adaptive requirements of the child with special need are considered.
- Empowering families as service providers to plan and work together in refining, reforming, revitalizing and redefining the services delivery system to suit current needs and in response to the expressed priorities of the children with disabilities.

In such a family oriented approach, every member of the family actively participates, everyone is involved in the management of the child with special need and towards this dedication the family members are educated, directed, facilitated and, empowered by the professional who cooperate with them in the provision of services. Families and professional are then collaborators in the human enterprise - the provision of services to persons with special need.

Early intervention programme:

At NIMH, Secunderabad, infants and toddlers with suspected or at risk of delayed development in the age group of 0-3 years are provided series of early intervention which constitute nearly one third of total number of clients seen in general services. These services are provided once a week basis by multi disciplinary experts. The parents are given guidance regarding immunization, nutrition, feeding - motor development, speech and languages development and psychosocial inventions.

The department of special education and medical rehabilitation division under the NIMH (presently known as NIEPID) take of early intervention programme with the children having intellectual disability.

The NIMH has developed a set of brochures covering (Persha, 2001).

1. Your newborn - birth to one month.

2. Watch them explore to 2-6 months.
3. Give them chance - watch them learn 6-12 months.
4. Let me play and enjoy - 12-18 months.
5. Feeding.
6. Car to become a good parent - follow these.
7. Immunization.
8. Hearing screening technique.
9. Play
10. Home hygiene.
11. Family planning.
12. Common illness in childhood.
13. First aid
14. Safety measures.

These materials were developed as a part of the Indo-US project on early intervention to inter-uterine growth retardation (IUGR) children at risk for developmental delays. As provision of information and guidance to parents and family is the major thrust of early intervention programme, the above brochures are developed.

Further, it is well known that early detection and intervention arrest further damage to children with special needs. Every child has a right to education and he/she must be made ready for the school. NIMH has developed school readiness for children with special needs (Narayan, 1999)

3.4 Main Body of Second Sub-unit

3.4.1 School Age - School age refers to the age range of children normally attending school. It is the period of Late childhood and extends from the age of six years to the time the individual becomes sexually mature.

CHARACTERISTICS OF SCHOOL AGE i.e. LATE CHILDHOOD

Parents, educators, and psychologists apply various names to late childhood and these names reflect the important characteristics of the period.

Names Used by Parents - To many parents, late childhood is the troublesome age - the time when children are no longer willing to do what they are told to do and when they are more influenced by their peers than by their parents and other family members.

Name Used by Educators - Educators call late childhood the elementary school age. It is the time when the child is expected to acquire the rudiments of knowledge that are considered essential for successful adjustment to adult life. It is also the time when the child is expected to learn certain essential skills, both curricular and extracurricular.

Names Used by Psychologists - To the psychologist, late childhood is the gang age - the time when children's major concern is acceptance by their age - mates and membership in a gang especially a gang with prestige in the eyes of their age-mates. Because of this absorbing concern, children are willing to conform to group-approved standards in terms of appearance, speech, and behavior. This has led psychologists to label late childhood as the age of conformity.

DEVELOPMENTAL TASKS OF SCHOOL AGE i.e. LATE CHILDHOOD

To achieve a place in the social group older children must accomplish the developmental tasks that society expects them to master at this time.

School age i.e. Late Childhood demands -

- Developing fundamental skills in reading, writing and calculating.
- Developing concepts necessary for everyday living
- Learning physical skills necessary for ordinary games.
- Building a wholesome attitude toward oneself as a growing organism
- Learning to get along with age-mates
- Beginning to develop appropriate masculine or feminine social roles
- Developing a conscience, a sense of morality, and a scale of values
- Developing attitudes toward social groups and institutions
- Achieving personal independence.

In school age Children are usually divided by age groups into grades ranging from first grade for the youngest children, up to twelfth grade (17-18 years old) as the final year of high school.

3.4.2 Placement Alternative - In school age also the education of children with special need is a challenging issue. For providing quality education to them certain educational principles and placement alternatives are made.

Needs of Special Education - Special Education is a form of learning provided to students with exceptional / special needs. Special Education (also known as special-needs education, aided education, exceptional education, special ed. or SPED) is the practice of special school of educating students in a way that addresses their individual differences and needs. Ideally, this process involves the individually planned and systematically monitored arrangement of teaching procedures, adapted equipment and materials, and accessible settings. These interventions are designed to help individuals with special needs to achieve a higher level of personal self-sufficiency and success in school and in their community which may not be available if the student were only given access to a typical classroom education.

Special Education requires continuum of Special Education services provisions or alternative programmes or variety of special treatment for students with special need in terms of their education and adjustment for their welfare, progress and development. Since these students have special needs, their problem are quite unique and special, a very careful consideration and wise planning on the part of imparting education is required.

Four aspects are unique about special education: specialized educators, special curricular content, special instructional methods, and special instructional materials. Prior to the mainstreaming trend these four services were almost always provided to children within the context of special classes or schools.

These classes and schools were categorized along a continuum reflecting their degree of separation from the mainstream. Resource room, self-contained classes, special day schools, and residential treatment centres reflect this continuum, with resource rooms being a relatively less restrictive environment than residential centres. The goal is to place a child in the least restrictive environment relative to the severity of his or her handicapped condition. Therefore, even with the current trend toward mainstream programmes, many exceptional children will receive some of their education in one or more of the special environments outside regular classes.

Residential Schools - The residential schools are primarily meant to provide 24 hour comprehensive education and care. In certain cases where the care and management

of the severely disabled child poses problems, it is necessary to send disabled children to residential institutions. In this case, the aim is not education. It is just a residential facility for care. Education is an adjunct to the total programme.

Home Bound or Hospitalized Instructions - The instruction is provided to children in Home / Hospitals in case they are under prolonged treatment for emotional problems, heart ailments, poliomyelitis, and chronic health problems. The special teacher goes to Home / Hospital to teach these children for a short period. It is psychologically and educationally useful.

Special Day Schools - In many countries special day schools for various categories of children with special needs have been set up. In large cities, special day schools cater to the needs of one type of disability but in small cities they are meant for two disabilities also.

Special Classes - Special class is a self-contained classroom is a regular school where children with special needs are admitted. There may be more than one special class depending on the number of children and the type of disability. The children receive instruction in the special class and are separated from normal peers.

Resource Room - A resource room is a separate, remedial classroom in a school where students with special needs are given direct, specialized instruction and academic remediation and assistance with homework and related assignments as individuals or in groups.

Resource rooms are learning spaces where a special education teacher instructs and assists students identified with a disability. These classrooms are staffed by special education teachers and sometimes paraprofessionals. Mainstreaming in education typically includes this service to students with special needs. These students receive special instruction in an individualized or group setting for a portion of the day. Individual needs are supported in resource rooms as defined by the student's Individualized Education Program (IEP). The student getting this type of support will receive some time in the resource room, which is referred to as a "removal from the regular education environment" portion of the day and sometime in the regular classroom with modifications and/or accommodations which may include specialized instruction with their non-impaired peers.

Placement in the resource room is intended to be of short duration. As students progress toward specified goals they are returned to full-time placement in the regular

classroom. Return to the regular classroom should progress through a gradual phasing out of support services. The resource room is to be considered as one type of service delivery within the continuum of services available.

Resource Teacher - A resource teacher's role is open ended and limited only by time, talent and acceptance of the teacher by the school administration and staff. The resource teacher is a trained specialist who works with, and acts as a consultant to other teachers, providing materials and methods to those who are having difficulties within the regular classroom. Usually the resource teacher works with the mildly handicapped population in the centralized resource room.

The role of resource Teacher has been identified as follows:

a. He/she should conduct and participate in the screening of children with disabilities, determine their strengths and weaknesses and prepare final report of referral.

b. He/she should provide instruction in small groups and/or individually as per need.

c. He/she should prepare lessons for a child who cannot function in a regular classroom in the area of difficulty.

d. He/she should provide resource room help till the child is fully integrated in the regular class.

e. He/she should provide consultant to the regular classroom teacher and parents.

f. Identify the physical or academic adaptation needed for the student to function in the regular class.

g. Participate in planning for mainstreaming activities.

h. Participate in parent and community orientation programmes or mainstreaming.

i. Seek out consultative relationships with specialist.

j. Determine goals for each student that are appropriate, realistic and measurable.

k. Determine group goals for the class as a whole and for subsets within the class.

l. Involve parents in setting goals for their children.

m. Design teaching procedures that will involve the entire class in grouping patterns that are varied and flexible.

n. Design a variety of alternative teaching strategies.

o. Develop plans for using human and material resources.

p. Develop a flexible time schedule that provides for learning, as well as the physical and social needs of each student.

Requirements of Equipment for Resource Room : Disability - Wise Inventory of Equipment of Material

Disability	**Aids and Equipments of Individuals**	**Materials Shared within a school**	**Materials Shared amongst schools**	**Instruct-Material**
Orthopedics	Adjustable furniture, special writing material, thick pen.	Adjustable furniture provision for development of improvised prosthetics.		
Visual Impaired Blind	Braille slate and stylus abacus. Taylor frame, Mobility canes	Brailler, Abacus, Taylor frame, Cassette and Talking books, Maps, Recreational material, Embossed recreational materials.	Braille sheets, Thermo form machine, Indu Brailon Maintenance services for Brailler, Embossed recreational materials.	Braille Material on cassette and talking books.
Partially sighted and low vision children.	Special adaptive equipment like hand magnifiers to be used with spectacles, reading lamps.	Specially designed desks with adjustable magnifiers, white boards in	Special arrangements for producing large print materials	Large print materials.
Hearing Impaired	Individual hearing aids	Voice trainer Mirror 3'x6' size for speech therapy, big mirrors 10'x6' in each classroom, group hearing aids, cell hearing aids.	Audiometer Voice trainer Maintenance facilities for hearing aids.	Special learning materials like flash charts, educational games, handouts of classroom activities.
Intellectually Impaired		Sensory apparatus and kits prepared on the lines of Maria Montessori Kits or produced by level of NCERT for early Childhood Education Programme		Material written on a lower reading average.

Inclusive Education - The term inclusive education refers to education of all children without discrimination of attainment, gender or disability into the regular school. It is about minimizing exclusion and fostering participation for all children in the culture within a wider framework of support of all children in ordinary schools. It is our unending set of processes in which children and adults with disabilities have equal opportunity to participate in activities. It is based on the principal of equalization of educational opportunity.

Instead of talking of a child as integrated, the concept of inclusion rather talks about the challenges that lie in keeping a group together.

Inclusion is not a set of strategies or a placement issue. Inclusion is about belonging to the community-a group of friends, a school community or a neighborhood. Ethlers (1993) defines three ways to view inclusion: through beliefs and values, through experiences and through outcomes.

In India, inclusion can be viewed from three perspectives:

1. Physical Inclusion
2. Social Inclusion
3. Cognitive Inclusion.

Physical Inclusion - In physical inclusion a disabled child receives consistent promotion, support and facilitation from the government. All the policies and government regulations have made education free and compulsory for all children. No institution can deny admission to a child with disability on the account of his or her disability. It will entail universal enrolment, retention and achievement.

Social Inclusion - It refers to acceptance of persons with disability by all sections of society. In lower socio-economic strata, researches indicate that there is greater acceptance of persons with disabilities with minimum expectations from them, whereas people from economically upper and affluent class of society have high expectations from persons with disability and for their acceptance they often do not move beyond denial (Bhan, Mehta, and Chaproo, 1998). Efforts are being made to change the attitude of all sections of society by undertaking various measures.

Cognitive Inclusion - Cognitive inclusion refers to education of disabled children in general classrooms with non-disabled children. Cognitive inclusion is possible only if

the subject matter is broken down into smaller learning units and teacher makes sure that each of the micro units of a lesson is learned by all children to expected level of mastery. Each child is given equal opportunity to learn, understand, retain and reproduce the information at an appropriate time and in an appropriate manner.

Inclusive education is a system of education that accommodates all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. The range of challenges confronting the school system while including children with diverse abilities and from diverse backgrounds have to be met by creating child centered pedagogy capable of successfully educating all children. An inclusive class may have amongst others, children with disability or gifted children, street or working children, children from remote or nomadic populations, children belonging to ethnic or cultural minorities or children from other disadvantaged or marginalized groups. Inclusive education is about restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in their locality. It has the following characteristics:

1. Inclusive education acknowledges that all children can learn.
2. It acknowledges and respects differences in children: age, gender, ethnicity, language, disability etc.
3. Enables education structures, systems and methodologies to meet the needs of all children.
4. It is part of a wider strategy to promote an inclusive society.
5. It is a dynamic process that is constantly evolving.

Inclusive Classroom - In inclusive education, children with disabilities are full time members of the general education classroom. The stress in the inclusive education is a providing the support necessary so that children can participate in a meaningful way in the ongoing classroom activities. Support may include adaptation of the curriculum, materials, or instructional techniques. It may also include additional staff, consultation from the specialists, or specialized training for the existing staff. Support services such as speech therapy and physical therapy are conducted in natural places in the school environment, including classrooms, yoga-room and playground.

Importance - By being in the inclusive education programme, students make significant gains in the areas of social competence and social play and in their cognitive and developmental domains.

Following are the points of importance of inclusive education:

1. Social Development - Students in the inclusive classrooms have more opportunities to observe, interact and imitate with students who have acquired higher level of motor, cognitive, social, and language related skills.
2. Motivation - Children in inclusive classroom are more motivated and try a little harder. They try to improve their behavior as environment in these schools is more demanding.
3. Peer Tutoring - In inclusive education, there are opportunities to learn directly from other children. One child instructs another. Both children make significant gains - the child doing tutoring and child being tutored.
4. Conductive Environment - In inclusive education, environment is more stimulating, varied and responsive than special classrooms consisting of children with single type of disability.
5. Professional Help - In inclusive education, various professionals work together to formulate Individualized Educational Programme (IEP). Teachers, special educators, physical therapists, speech therapists, occupational therapists, psychologists, social workers etc. work for formulation and execution of educational programmes.

3.4.3 The Multidisciplinary Team collaboration

What is Multidisciplinary Team?

It is a team approach, including the integration of values, perspective, and ideas that gives an accurate decision-making process in identifying the academic, social, and vocational needs of the child to develop an individualized educational program that will meet the needs of that child with disability.

The team functions to support students in the Special Education and related services. Members would share responsibility and have to maintain an open communication in the form of collaboration.

In assessing a child with special needs, the major functions of the team are:

1. To determine if the student has a disability and would require special Education services.
2. To plan and evaluate educational experiences of students who have been diagnosed to be in need of Special Education services; and
3. To develop an action plan that would meet the needs of the child with disability in terms of education, social, and vocation.

The basic multidisciplinary team activities include

1. Evaluating student who are experiencing difficulty in the regular class upon referral or student who are in need of Special Education after entering the educational system;
2. Developing strategies that may be used as intervention in the regular class for those students who will be benefited most from regular education while providing modifications to suit their needs;
3. Initiating the process of assessment for students who are suspected to have disability;
4. Reviewing existing information and student assessment data that will be used as the bases for developing individualized educational programs for the students;
5. Deciding on the appropriate placement for the student, educationally, socially, and vocationally, and
6. Acting as a support system for educators who will be serving students with disabilities.

Members of the multidisciplinary assessment team

1. Administrators

The administrators should have the know-how of specific resources and the expertise within the school. Furthermore, administrators are qualified to supervise the programs and can commit necessary resources.

Specific responsibilities of administrators in the assessment process are:

a. Conducting administrative arrangement for team meetings. This includes scheduling the date, time, and place of meetings;

b. Organizing an agenda for the meeting with the assessment team;

c. Identifying experts and appropriate personnel and inviting them to the meeting;

d. Inviting the parents of both the child with special needs and regular students to the meeting;

e. Acting as the chair during the meetings or appointing qualified personnel;

f. Ensuring that each person has the knowledge on what action the team recommends, the person responsible for implementation, and the resources needed to support implementation effectively;

g. Ensuring administrative supports of the team to all members of the school community;

h. Promoting resources to secure the needed technical assistance;

i. Identifying the needed topics for in-service and developmental training

2. Regular Education Teachers

The Regular Education teacher's role concerns the presentation of subject matter in the classroom and is primarily in a charge of instruction in the classroom.

In assessing children with special needs, it is the general role of the Regular Education teacher to accomplish the following:

a. Maintain appropriate communication between the school and home. The teacher should keep parents informed about their child's educational achievement, grades, and educational programs;

b. Help to develop, review, and revise the Individualized Educational Program (IEP) of the child;

c. Determine appropriate behavioral interventions and strategies considered positive for the students;

d. Assess determined supplementary aids and services and program modifications for the students; and

e. Identify supports that school personnel need to help the student progress in the general curriculum

3. Special Educational Teachers

The roles of the Special Education teachers are to individualize, diagnose, and modify curriculum. A typical Special Education teacher would teach students with disabilities in self-contained classes.

To be effective, the role of the Special Education teacher in schools include the following:

a. Provides assessment and instructional planning for the student with disability;
b. Conducts tutorial instruction and remedial classes for students with lower-par performance level;
c. Provides consultation to the Regular Class teacher as part of team teaching;
d. Participates as members in the school's assessment and eligibility committee;
e. Examines ways of including students in all aspects of the school's program which includes extracurricular activities also; and
f. Offers suggestions for modifying instruction, consults with the regular Education teacher, and identifies resources, alternative learning materials, and assisstive devices that will be of benefit to the child with disability(as part of the multidisciplinary).

The Special Education teachers can help parents in the following ways:

a. Gather useful information about the student from the parents;
b. Explain the process of IEP
c. Help the parents during IEP process, ensuring that their ideas, concerns, and views are adequately expressed and heard;
d. Furnish parents with narrative reports and suggestions on how to work effectively with their child at home;
e. Help the student and the parents in planning the students' future after leaving the school; and
f. Advocate through representation of interests, preferences, and rights of the student or parents.

4. Students

Students are encouraged to be active participants in their own IEP process. Priority is set in teaching self- determination skills and how to set their own life goals and objectives.

5. School Psychologist

The school psychologist may assume the following responsibilities:

a. Complete thorough assessment to determine if the child is suited for special programs and services

b. Provide interpretation and analysis of assessment data for parents and other team members;

c. Participate in the identification of curriculum modification and instructional intervention ; and

d. Conduct follow-up observations to establish the success of modifications and interventions

6. Related Service Personnel

Related Support people will assist the Regular Education and Special Education services which include:

A. Speech/Language Therapist

The speech/language therapist plays a critical role in assessing, and treating patients who have speech, language, and communication disorders

B. Occupational Therapist

After physical assessment, an occupational therapist assists a child with disability in developing and regaining skills important to functions independently and develops health and well being.

C. Physical Therapist

A physical therapist assesses each individual and devices a plan using different treatment techniques to promote the ability to move, reduce pain, restore functions, and prevent further disability.

D. Vision Specialist

A vision specialist or usually termed as teacher of the visually impaired is trained to work with visually impaired students from preschool through latter grades.

E. Guidance Counselor

The main role of a guidance counselor is to aid clients with their adjustment to some circumstances in their life, utilizing counseling techniques in personal, educational, and vocational counseling.

3.5 Main Body of Third Sub-unit

3.5.1. Transition - "Transition" according to Medeline Will (1984), "is an outcome oriented process encompassing a broad array of services and experiences that lead to employment in a period that includes high school, the point of graduation, additional post secondary education or adult services and the initial years in employment".

Madeline Will (1984) has conceptualized a transition model which is characterized by

- An emphasis on quality secondary programmes;
- A description of generic employment services;
- Time limited employment services;
- Ongoing employment services; and
- An array of adult employment alternatives.

Special efforts are necessary for successful "transition" of the individual with special needs.

Transition services are a coordinated set of activities for a student with disabilities designed within an outcome oriented process. It promotes movement from school to post school activities. That is, outcomes that are envisaged for the student in adult life. Coordinated set of activities imply:

- Linkages should be established between schools and community agencies to ensure smooth service delivery.
- Activities to be listed in Individualized Training Programme (IEP) include community experiences, development of employment and post-school adult living objectives, appropriate daily living skills and functional evaluation.

Halpern (1985) broadened Will's definition to include community adjustment as a desired adult outcome. In addition to employment, he suggested a more comprehensive approach to transition that included the components of residential adjustment and the establishment of desirable social and interpersonal networks. Halpern (1989) further proposed that community adjustment would be enhanced by developing personal factors such as one's self-esteem and empowering the individual to select his or her own goals and make decisions.

Transition from school to work

The main aim of transition planning is to offer services to empower the persons with disabilities with necessary skills and competencies in order to lead a better life in adulthood. As emphasized by Halpern (1985), transition process must yield success in residential, social /interpersonal domain a well as in employment. According to Wehman, Kregel and Barcus (1985), vocational transition is a carefully planned process which may be initiated either by school personnel or adult service providers, to establish and implement a plan for either employment or additional vocational training of a student with disability who will leave the school in 3-5 years; such a process involves special educator, vocational educator, parents and / or the student, the adult service system representative and possibly an employer.

The rationale behind the transition programme is to ensure the quality of life persons with disabilities by bridging the gap between the school and post school activities. This is made possible through a comprehensive programme which envisages functional curriculum, integrated service system and provision for community based instruction for the persons with disabilities. Vocational transition plan for each student with disability is developed to achieve the following objectives:

- To provide opportunities and services that will support quality of adult living.
- To prepare persons with intellectual disabilities towards a work oriented program.
- To impart training and create opportunities for the development of generic skills.
- To impart training for the development of practical applicability of the learnt skills in day to day living.
- To develop adjustment potentials of persons with disabilities by putting them through various situations.
- To develop their work potential through graded exposure and varied training situations.
- To maximize the productivity and independence of students leaving the school.

From the objectives listed above, it is obvious that the transition programme is a comprehensive one involving elaborate process which includes a number of components in order to make the programme more meaningful in terms of enhancing quality of life of persons with intellectual disability. Hence, to make an appropriate transition plan for

individuals with intellectual disability, the following components need to be duly considered.

Components in transition

- Members are drawn from different disciplines
- Parents and other community service agencies are involved in transition planning
- Transition planning encompasses services and supports across all areas of one's life
- Individual needs are identified and addressed through a systematic, ongoing, comprehensive transition plan which is initiated during the secondary school period.
- The accomplishment of outcome is measured in terms of student's successful achievement of set goals in personal life, social situation and employment situation.

Thus the transition programmes are designed to prepare students to live and function in the community as effectively as possible. Through the programme the students are expected to acquire, perform and maintain skills across a variety of environments. Of course, the success of transition programme depends upon the coordinated efforts of a number of providers.

Who are the service providers?

Depending on the needs of the individuals and resources available in the community, the following service providers may be involved:

- Special educator
- Vocational instructor
- Therapists
- Counselor
- Social worker
- Parents / students
- Employer
- Community member

Transition portfolio

As the student with disability is expected to assume a new role with different responsibilities and function effectively in a totally different environment once he/she leaves the school, a transition portfolio for each student is indispensable at this stage. A transition portfolio is a strategy that documents critical information about a student. A portfolio is student specific and contains not only basic student information (such as age, gender, parent names), but also additional components such as :

- Personal information
- Medical information
- Educational programming suggestions
- Ideas for adaptations and supports
- Recommendations for physical impairments
- Expressive and receptive communication strategies
- Reinforcement strategies and positive behavioral support plans
- Problem-solving techniques and team notes

Transitions are likely to progress more smoothly if relevant student specific information can be provided to new trainers, service providers and support personnel in a non-technical manner. For example, student-X behaves differently on reaching the Centre and accepting the assignment from the instructor. He may initially try to avoid the instructions by turning the head/closing eyes with hands. As the interaction increases with others, he starts adapting to the situation and gradually follows instruction.

Foundation of effective transition

Major goal for education should be to enable the persons with disabilities to function as independently as possible in all spheres of life. Since economic independence is an important aspect of independent living, special emphasis is given on the employability of the adults with disabilities. These goals can only be achieved through careful planning and preparation for post school placement.

Functional curriculum

Teaching should be imparted to prepare persons for vocational opportunities that are available in the community. For that purpose school personnel should assess available

community employment and analyze the specific skills required for the performance. On the basis of this assessment vocational curriculum can be developed.

Selection of vocational skills should not be based on convenience or restricted to availability of the equipments / resources in the school; rather a functional curriculum should ensure generalization of learnt skills to potential jobs and also should facilitate students' movement from school to work place.

3.5.2 Career Development

Career development is the lifelong process of managing learning, work, leisure, and transitions in order to move toward a preferred future. Career development is the series of activities or the on-going/lifelong process of developing one's career. It involves training on new skills, moving to higher job responsibilities, making a career change within the same organization, moving to a different organization or starting one's own business.

Career Development and Transition for Exceptional Individuals (CDTEI) specializes in the fields of secondary education, transition, and career development for persons with documented disabilities and special needs.

Vocational training for persons with disabilities should not start at the school leaving age; rather, it should begin early and continue through the school years. Early vocational emphasis means that one selects appropriate vocational objectives for training at each age level (Wehman, 1983). Objectives should reflect behaviours that are important to community functioning and employment.

According to Baine, (1988) curriculum developed without reference to the environment in which the task must eventually be performed may result in the skills being taught in isolation. Hence, skills should be taught in the same manner in which they are required in the natural environment. For identifying such skills to develop the curriculum for persons with disability, an ecological assessment needs to be conducted. For such assessment, it is imperative to identify the boundaries of the environment (Home, Community, Vocational and School) in which non-handicapped age mates are functioning. In each environments, the sub environments are also to be identified and all those tasks are listed which are performed by the non handicapped peers. From this list, it is assessed what the handicapped persons are currently performing, what they can perform if trained and what they are expected to perform in these environments if

he/she has to be functional. Those tasks are included in the curriculum. Attainment of these curricular goals can make the handicapped person more independent in his or her environment. Hence, the curriculum can be called as a Functional curriculum. Similarly for identifying suitable jobs for the handicapped persons, discrepancy analysis has to be carried out so that the scope of employment opportunities for them in the community can be expanded.

So a functional approach to vocational training should be longitudinal with activities that facilitate improvement in vocational skills (attending to a task, broadened range of jobs a student can perform, production quality and so on) and in job related skill areas (independent mobility, ability to interact with co-workers and so on).

This curriculum should emphasize on 3 habilitation environments : work, living and community interaction. The functional curriculum should be merged with the students' Individualized Education Programme (IEP) through the following 3 steps.

1. Initial IEP meeting
2. Assessment
3. Develop, implement and monitor the IEP

Integrated school services

To prepare the persons with intellectual disability to work in it is necessary to provide them with exposure to and experience in dealing with the demands and expectations of these environments. Work behavior should take place in real job situation in the community. They should be trained and should work in the community whenever possible - not only to expose them to the community and work expectations but also to expose future employers and co-workers to their potential prospective employee with disabilities who also can be reliable employee.

Community based instructions

Job training sites should be established in vocations where there is a potential market for employment. Trained personnels must be provided to give training and systematic instructions at these community sites. Emphasis should be given on behaviours like acquisition of specific job skills, production rates, mobility and interpersonal skills.

Community based instruction is the most important aspect of employability. Even the best curriculum in the most integrated school setting will not enhance employability without ongoing exposure to and experience in community work situations.

Thus, functional curriculum prepares students to learn appropriate skills, an integrated training environment enhances interpersonal skills and community based instructions improve each of these components by allowing the students an opportunity in natural situations. An appropriate special educational programme is characterized by

3.5.3 Individualized Transition Plan, or ITP, is a plan based on informal and formal assessments that is used to identify the desired and expected outcomes by students and their families once they leave school as well as the supports needed to achieve these outcomes.

A compelling need exists to improve the outcomes of youth with disabilities and attempts were made for the requirement of specifying in a student's IEP the services that would be provided to aid the student's transition from school to adult life. This part of the IEP, known as the individualized transition plan (ITP), helps to focus educators' attention on outcomes and the preparedness of youth to assume productive adult lives, Section 602 of the Individuals with Disabilities Education act defines transition services as "a coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities, including post-secondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. The coordinated set of activities shall be based upon the individual student's needs, taking into account the student's preferences and interests, and shall include instruction, community experiences, the development of employment and other post-school adult living objectives, and when appropriate, acquisition of daily living skills and functional vocational evaluation.

Individualized Transition Plan focus mainly on (1) Job analysis, (2) Job matching and (3) job training of persons with disabilities / special needs. It insists in identifying possible jobs in consultation with parents / care taker. It is also suggested that the transition plan should be the part of ITP, which avoids unnecessary confusion of parents / care taker about the post school programmes of their children.

The transition plan has two parts: postsecondary goals and transition services.

Postsecondary goals

These goals state what the child wants to do or achieve after high school. Goals can be in four areas:

1. Vocational training (e.g., learning a trade)
2. Postsecondary education (e.g., college or other schooling)
3. Jobs and employment
4. Independent living, if needed

Just like annual IEP goals, transition goals must be written with a result in mind. They must also be measurable. In other words, one has to be able to know if the goals have been accomplished.

Goals may be more general for kids in middle school and starting high school. They become more specific as kids enter later grades.

For example, a transition goal for an eighth grader might be: After high school, I will work full time in a career working with cars.

An example of a goal for a 10th grader might be: After graduating from high school, I will work full time in a career as a mechanic.

One way to make sure that the child has appropriate transition goals is to see if they are "SMART." This stands for specific, measurable, attainable, results-oriented and time-bound. Keep in mind that the child's transition goals may change several times as his / her interests develop. Transition goals are reviewed and updated every year, along with the rest of the IEP. When he/she graduates or leaves high school, he/she'll get what's called a summary of performance. This document lists his/her academic and functional skills, and offers recommendations for achieving his/her postsecondary goals.

Once transition goals are set, the IEP team will decide what services the child needs to meet his/her goals. The range of possible services is very broad. It can include:

- Instruction (including special education)
- Related services
- Community experiences, like volunteer work
- Career and college counseling
- Help with daily living skills, if needed

The team may also use IEP goals to support the transition plan. For instance, if your child wants to attend auto mechanic school, he may first need to learn specific math

skills. As a result, the team may need to set IEP goals and provide school services related to math.

Some transition services can take place at school. But often, transition services are provided at home or in the community. Or they may require activities outside of school.

Transition goals related to independent living may involve having your child take on responsibilities. Here are some examples of what your child may learn to do in preparation for adulthood:

- Open a bank account and learn to manage money.
- Shop for groceries and plan and prepare meals.
- Be responsible for maintaining a car and buy auto insurance.
- Use public transportation.
- Schedule her own appointments with the doctor and dentist and choose health insurance.
- Set up and use a calendar for school, work, personal appointments and leisure time.

Similarly, one may explore college, career and job options in the broader community.

Here are some activities he may do:

- Visit local colleges and training schools he's interested in attending.
- Meet with other students who have gone on to college or career. If they also have learning and thinking differences, talking with them may be extra helpful.
- Look into local internships and apprenticeships.

Transition planning is the key to making school relevant to the child's future life as an adult. Together, the IEP team and the child will set postsecondary goals, choose activities, and connect with the necessary resources and services.

3.6 Main Body of Forth Sub-unit

3.6.1 Vocational Development -

Vocational development is the process of developing and implementing a self-concept. As the self-concept becomes more realistic and stable, so does vocational choice and

behavior. Work satisfaction is related to the degree that employers have been able to implement their self- concepts.

Vocational skills for special education is designed to prepare students for life beyond the classroom setting. The teaching of vocational skills is intended to set up the student for success after secondary education. Through vocational skills training students will learn how to prepare for a job, find a job, apply for a job and excel at a job.

From as early as elementary school, a special needs student is preparing for future employment by learning pre-vocational skills. These job readiness skills help students to focus on the tasks at hand, use their time to their benefit, interact with fellow students and faculty and follow directions. Pre-vocational skills for students with disabilities include Time management, Problem solving, Critical thinking, Personal hygiene and appearance, Responsibility and integrity, Attitude and demeanor.

A good set of Vocational skills are needed to be established by the time the student has reached his final years of high school. Like work readiness, Interview and job search skills, social and communication skills, task analysis, career choice, safety etc.

Beyond vocational skills - once a person with special needs or disabilities is hired, he/she will train in a vocational school to excel in a chosen field. Vocational skills for special needs students can vary depending on what industry they hope to enter, like any position that requires the employee to interact with the public or clients will expect the employee to dress accordingly and present himself / herself in a helpful, pleasant and informative manner.

Vocational assessment is a comprehensive process that systematically utilizes work, real or simulated as the focal point for assessment and vocational exploration, the purpose of which is to assist the individual in vocational development (Arya, 1990). The basic aim of vocational assessment is to address four major issues: eligibility for services, vocational potential, psychological and social maturity, any problems which might require intervention.

- Vocational assessment must be ecological. That is, it should be relevant to the psychological, social and physical background to which the individual belongs.
- Vocational assessment must be carried in situation, which is identical to the real situations as far as possible.
- Assessment methods should be able to predict the future job performance.

- Assessment methods should be in the context of present and future job placement opportunities.
- It should focus on both work skills and behavioural skills that might affect the job performance.
- The assessment must provide information on both generic and specific skills.

Based on the above, it is understood that vocational assessment should include assessment of individual abilities within the context of job opportunities and support system. To a large extent this reflected in NIMH Vocational Profile and Placement Checklist (Department of Vocational Training, 1991). This checklist contains two parts - Part A and Part B. Assessment on Part - A is conducted within the context of a job, and acquires information in the following domains through open-ended questions:

- Generic skills
- Specific skills
- Description of daily routine.
- Employment of experience
- Possible employment options
- Areas of support.

On the other hand, Part - B covers the following eight domains that reflect the individual's adaptive behavior:

- Self-help
- Communication
- Social behavior
- Functional academics
- Safety skills
- Domestic behavior
- Motor skills
- Vocational skills

When Part-A and Part-B are combined, they give comprehensive information about the current abilities and needs of the individual within the context of vocational training. Assessment is conducted at three levels: before (i.e. entry level), during (i.e. formative) and after (i.e. summative) the training programme. This checklist can be adapted to any work conditions.

3.6.2 Employment

Employment can mean a lot of things to a lot of people. For most people, employment means having an integrated job in the community, which means a job just like everyone else, has. An individual may receive specialized supports to help them find, learn, and keep a job. Employment is an important part of the economic, social and environmental development process and procedure of any country. Employment provides financial freedom and decision making power.

When students with disabilities leave school, most are unemployed or underemployed. Only a third of people with disabilities between the age of 16 and 64 are working, and of those working, three-fourths have part-time jobs (Wagner, D'Amico, Marder, Newman, & Blackorby, 1992) Employment is the single most important concern of those who work with older people who are disabled. School personnel report that adults with disabilities need vocational training, placement and evaluation services more than they need transition or post employment services.

Types

In recent years various employment models have emerged. Some of the models described in western literature may not be suitable in Indian conditions. Success of any model will depend on the effectiveness of placement, retention and employer - employee satisfaction. Depending on the ecological status, jobs can be identified and matched to the abilities of the individual with special need. Discussed below are some of the popular models.

Competitive employment - The most common work experience for people with disabilities is in sheltered and supported employment settings, not competitive employment. Competitive employment means that the individual's work is valued by the employer and is performed in an integrated setting with co-workers who are not disabled. Despite the low percentage of adults who are disabled in competitive employment settings, most professionals agree that competitive employment should be the goal of all young adults with disabilities.

Sheltered employment - Sheltered employment is work in a self-contained environment in which people who are exceptional are trained and paid for their output. Some sheltered workshops provide training for work that is performed outside the special setting. Other sheltered workshops are permanent work settings for the exceptional people who work there.

Supported employment is a relatively new concept that is designed for individuals with disabilities who need help in finding, performing, and holding a job. Professionals who provide supported employment assistance to people with disabilities do one or more of the following tasks:

Professionals' role in supported employment

- Assist during job placement efforts (plan transportation, identify appropriate jobs, match skills to available jobs, communicate with social service agencies)
- Provide on-the-job training and help (train work skills, provide social skills and job-site training, and work with co-workers) (The person who does this is usually called a job coach.)
- Monitor job performance (obtain regular feedback from employers, identify levels of performance and need for further training)
- Provide evaluation and follow-up experiences (determine employer's satisfaction, communicate with employee periodically, help with future job placements.

Professionals in supported employment activities spend most of their time at the job sites where people with disabilities work. Supported employment specialists also spend time working with parents and exceptional people in training centers or at their homes.

People with disabilities are much more likely to find and keep jobs today than they were even a few years ago, largely because parents and professionals have worked to give them opportunities to become contributing members of society.

Self employment

Where the parents or family members have the resources to provide support to run a small scale business at home/some specified place, persons with special need are encouraged for this type of employment. In this situation, these individuals can be trained for carrying out simple activities in pre determined business. Often persons with special needs are encouraged to join hand with the family members in their family business.

While self employment is the most frequent expression of self directed employment, whether part or full time, it may also refer to group approaches such as worker owner business.

This model serves an employment alternative for those persons with special need hailing from sound economic background as their parents often hesitant to engage their wards in community job sites. India being a country predominantly with rural areas with occupations such as agriculture, dairy farms, horticulture, floriculture, sericulture, and aquaculture and so on, self employment can be a viable option with the family support.

In order to enhance/create employment opportunities for persons with special need, the following points need to be duly considered while planning training programmes for empowering them.

1. Right from the beginning, education and training of person with special need must focus on vocational oriented activities.
2. To identify the specific aptitude and interest of persons with special need, exposure to various vocational activities need to be ensured during secondary school period.
3. To create interest, build confidence and enhance competency in related community living skills leading to inclusion, exposure to community based vocational activities need to be incorporated.
4. Opportunities for including persons with special need in the job market is to be ensured by

a. Emphasizing the competencies acquired rather than the educational qualifications.

b. Allocating certain percentage of jobs for persons with special need and providing incentives to the employers.

3.6.3 Emerging Job opportunity-

During the past decade there has been a noticeable increase in the number and types of occupations the qualified special need person - specially person with intellectual impairment are able to perform.

These jobs have tended to pattern themselves in the major occupational areas listed below.

Type of occupation	Percentage
Service workers	30. 0
Unskilled workers	21. 2
Semiskilled workers	19. 3
Clerical, sales	12.0
Family workers, homemakers	6.2
Agricultural workers	5.9
Skilled employees	5.4

Within these occupational areas there has been a noticeable increase in the types of establishments and places of employment where the person with intellectual impairment have found jobs.

Among other places, the intellectually special need are working in laundries, dry cleaning establishments, restaurants, gas stations, barbershops, beauty parlors, hospitals, nursing homes, private homes, nurseries, publishing houses, retail stores, factories, and farms.

Over the years, the qualified person with intellectual impairment have been successfully employed in the following jobs (as well as hundreds of others) : general office clerks, messengers, office boys, mail carriers, stock clerks, salesclerks, domestics, day workers, housekeepers, attendants, ward helpers, busboys, kitchen helpers, dishwashers, personal service workers, porters, janitors, sextons, attendants, recreation and amusement workers, farmhands, landscape laborers, grounds men, bakers, construction workers, unskilled laborers, textile machine tenders, welders, route men, packers, assemblers, inspectors, laundry sorters, filling station attendants, carpenters' helpers, metalworkers, warehousemen. And the list grows and grows.

Placements - Disability by no means implies a total absence of skills and aptitudes. Only his certain capacity is restricted - not necessarily the rest potentialities of him. Proper placement can play up the skills and play down the difficulties. A vital reason for successful placements has been preparation and training, provided by the many vocational rehabilitation agencies and sheltered workshops, which serve adult person with intellectual impairment. In a typical sheltered workshop, the adult person with

intellectual impairment is given a comprehensive vocational rehabilitation program of evaluation and training which takes about a year. He is exposed to a simulated work atmosphere. He is evaluated and trained by professional staff in a wide variety of work situations.

Individual vocational analysis is made, and suitable preparation is given for competitive employment. The trainee is expected to learn the basic skills essential to work. He is given every opportunity to demonstrate his ability to use hand and machine tools. Eventually, he is able to develop tolerance for full-time employment. Finally, the day comes. He is ready for work.

Follow-up assistance - Follow up is a continuation or repetition of something that has already been started or done.

The agency which referred the worker with intellectual impairment to an employer should be able to furnish follow-up service or guidance. Most rehabilitation agencies have a staff person who specializes in follow-up.

In the sheltered workshop, it may be the director or his job placement staff member. In the public vocational rehabilitation agency, it usually is the vocational rehabilitation counselor. In the State Employment Service, it is likely to be the selective placement interviewer or employment counselor.

In most residential centers, it is the social worker in the social service department.

In private trade schools, it is the director, social worker, or placement counselor.

If problems arise, it is to the agency's advantage to be called in early to solve them before they grow too severe. In many cases, it is possible to clear up a problem with a telephone call or letter or short visit with the agency counselor. If the company wishes to transfer the special need worker to another department for a different type of job, it would be wise to learn whether the referring agency can provide further evaluation and training for this purpose.

Follow-up can assist in:

- identifying any stress and anxiety experienced by the disabled worker in the early stages of the job
- identifying whether the disabled worker can actually do the job
- seeing whether additional workstation adaptations are necessary

- demonstrating to the disabled worker and the employer that the follow up officer is interested and concerned
- evaluating the quality of job-matching process
- determining how well training institutions prepare disabled persons for actual work situations
- providing feedback to the agencies concerned.

Further Follow-up can assist the disabled worker in keeping the job if one asks such questions as:

- How are you getting on in the job?
- Do you think you will stay on after the probation period?
- Is your job still the same?
- How many hours do you work?
- Are the employment conditions and salary as promised?
- Are you having any particular problems?
- What adjustments have been made to your workstation?

Follow-up can assist the employer by focusing attention on the disabled worker and the job with a view to minimizing problems.

Ask the employer:

- Are you happy with the worker?
- Have your expectations been met?
- What is the worker's attitude to the job?
- How does the worker relate to fellow workers?
- How do fellow workers relate to the disabled worker?

3.7 Main Body of Fifth Sub-unit

3.7.1 Implications of the above for inclusion

Inclusion in education refers to a model wherein students with special needs spend most or all of their time with non-special (general education) needs students. It arise in

the context of special education with an individualized education program and is built on the notion that it is more effective for students with special needs to have said mixed experience for them to be more successful in social interactions leading to further success in life. Inclusion rejects but still provides the use of special schools or classrooms to separate students with disabilities from students without disabilities. Schools with inclusive classrooms do not believe in separate classrooms. They do not have their own separate world so they have to learn how to operate with students while being less focused on by teachers due to a higher student to teacher ratio.

Implementation of these practices varies. Schools most frequently use the inclusion model for selected students with mild to moderate special needs. Fully inclusive schools, which are rare, do not separate "general education" and "special education" programs; instead, the school is restructured so that all students learn together.

Inclusive education differs from the 'integration' or 'mainstreaming' model of education, which tended to be concerned principally with disability and special educational needs, and learners changing or becoming 'ready for' or deserving of accommodation by the mainstream. By contrast, inclusion is about the child's right to participate and the school's duty to accept the child.

A premium is placed upon full participation by students with disabilities and upon respect for their social, civil, and educational rights. Feeling included is not limited to physical and cognitive disabilities, but also includes the full range of human diversity with respect to ability, language, culture, gender, age and of other forms of human differences. Richard Wilkinson and Kate Pickett wrote, "Student's performance and behaviour in educational tasks can be profoundly affected by the way we feel, we are seen and judged by others. When we expect to be viewed as inferior, our abilities seem to diminish"

Regarding individuals with disabilities and special education, inclusion secures opportunities for students with disabilities to learn alongside their non-disabled peers in general education classrooms.

Exploring Activities to Promote Inclusion

1. Use icebreakers.
2. Scale down new skills.
3. Choose activities that address each need.

4. Involve all participants.
5. Modify activities when necessary.
6. Alter the method of instruction.
7. Encourage assistance and cooperation.

Four important strategies to consider when designing an inclusive classroom and curriculum.

1. Use universal design principles to create accessible classrooms.
2. Use a variety of instructional formats.
3. Know your students' IEPs.
4. Develop a behavior management plan.

Benefits of Inclusion

- The opportunity to participate in the typical experiences of childhood.
- The opportunity to be with other children and form friendships and develop other social skills.
- The opportunity for natural learning of skills in real situations.
- access to peer models

Increased interaction with typically developing children can help students with special needs develop social and communication skills. The inclusion model is also beneficial because it prepares special needs students for life after school, when they will have more contact with non-disabled people.

Students in an inclusive classroom are generally placed with their chronological age-mates, regardless of whether the students are working above or below the typical academic level for their age. Also, to encourage a sense of belonging, emphasis is placed on the value of friendships. Teachers often nurture a relationship between a student with special needs and a same-age student without a special educational need.

Another common practice is the assignment of a buddy to accompany a student with special needs at all times (for example in the cafeteria, on the playground, on the bus and so on). This is used to show students that a diverse group of people make up a community, that no one type of student is better than another, and to remove any barriers

to a friendship that may occur if a student is viewed as "helpless." Such practices reduce the chance for elitism among students in later grades and encourage cooperation among groups.

Teachers use a number of techniques to help build classroom communities:

- Using games designed to build community
- Involving students in solving problems
- Sharing songs and books that teach community
- Openly dealing with individual differences by discussion
- Assigning classroom jobs that build community
- Teaching students to look for ways to help each other
- Utilizing physical therapy equipment such as standing frames, so students who typically use wheelchairs can stand when the other students are standing and more actively participate in activities
- Encouraging students to take the role of teacher and deliver instruction (e.g. read a portion of a book to a student with severe disabilities)
- Focusing on the strength of a student with special needs
- Create classroom checklists
- Take breaks when necessary
- Create an area for children to calm down
- Organize student desk in groups
- Create a self and welcoming environment
- Set ground rules and stick with them
- Design a multi-faced curriculum
- Communicate regular with parents and/or caregivers
- Seek support from other special education teachers

Inclusionary practices are commonly utilized by using the following team-teaching models:

- One teach, one support:

In this model, the content teacher will deliver the lesson and the special education teacher will assist students' individual needs and enforce classroom management as needed.

- One teach, one observe:

In this model, the teacher with the most experience in the content will deliver the lesson and the other teacher will float or observe. This model is commonly used for data retrieval during IEP observations or Functional Behavior Analysis.

- Station teaching (rotational teaching):

In this model, the room is divided into stations in which the students will visit with their small groups. Generally, the content teacher will deliver the lesson in his/her group, and the special education teacher will complete a review or adapted version of the lesson with the students.

- Parallel teaching:

In this model, one half of the class is taught by the content teacher and one half is taught by the special education teacher. Both groups are being taught the same lesson, just in a smaller group.

- Alternative teaching:

In this method, the content teacher will teach the lesson to the class, while the special education teacher will teach a small group of students an alternative lesson.

- Team teaching (content/support shared 50/50):

Both teachers share the planning, teaching, and supporting equally. This is the traditional method, and often the most successful co-teaching model.

Children with extensive support needs

For children with significant or severe disabilities, the programs may require what are termed health supports (e.g., positioning and lifting; visit to the nurse clinic), direct one-to-one aide in the classroom, assistive technology, and an individualized program which may involve the student "partially" (e.g., videos and cards for "visual stimulation"; listening to responses) in the full lesson plan for the "general education student". It may also require introduction of teaching techniques commonly used (e.g., introductions and interest in science) that teachers may not use within a common core class.

Another way to think of health supports are as a range of services that may be needed from specialists, or sometimes generalists, ranging from speech and language, to visual and hearing (sensory impairments), behavioral, learning, orthopedics, autism, deaf-blindness, and traumatic brain injury, according to Virginia Commonwealth University's Dr. Paul Wehman. As Dr. Wehman has indicated, expectations can include post secondary education, supported employment in competitive sites, and living with family or other residential places in the community.

Recruiting from a diverse pool of candidates means a more qualified workforce. A diverse and inclusive workforce helps businesses avoid employee turnover costs. Diversity fosters a more creative and innovative workforce. Businesses need to adapt to our changing nation to be competitive in the economic market.

Inclusion, while closely related, is a separate concept from diversity. Here inclusion can be defined as "the achievement of a work environment in which all individuals are treated fairly and respectfully, have equal access to opportunities and resources, and can contribute fully to the organization's success

Here are five ways that one, as an employee, can help create a more inclusive workplace immediately:

1. Bounce an idea off of someone unexpected in your office.
2. Change up your environment.
3. Rotate who runs your meetings.
4. Leave your assumptions at the door.
5. Talk about something other than work.

The 7 Pillars of Inclusion are

- Access.
- Attitude.
- Choice.
- Partnerships.
- Communication.
- Policy.

- Opportunities.

An inclusive culture involves the full and successful integration of diverse people into a workplace or industry. Additionally, inclusive cultures extend beyond basic or token presence of workers who have disabilities.

3.8 Let us sum up

Infancy begins with birth and ends when the infant is approximately two weeks old, by far the shortest of all developmental periods. It is the time when the fetus must adjust to life outside the uterine walls of the mother where it has lived for approximately nine months. Subdivisions of Infancy is Period of the Partunate & Period of the Neonate. Infancy is a time of radical adjustments, it is plateau in development.

Baby Hood is a period of gradual but pronounced decrease in helplessness. This does not mean that helplessness quickly disappears and is replaced by independence. Instead, it means that every day, week, and month the individual becomes more independent so that, when babyhood ends with the second birthday, the individual is a quite different person than when babyhood began. Babyhood is the true foundation age, it is an age of rapid growth and change, an age of decreasing dependency, is the beginning of socialization and the beginning of sex-role typing.

Early Childhood extends from two to six years. Physical development in early childhood mainly occurs in Height, Weight, Body proportions, Bones and muscles and Teeth. Tasks involved in this period is learning to speak, pronunciation of Words, vocabulary building and forming sentences. Common emotions of early childhood are anger, fear, jealousy, curiosity, joy, grief and affection. Social behaviour patterns are imitation, cooperation, sympathy, empathy, social approval, sharing & attachment behavior. Unsocial behaviour patterns are negativism, aggressiveness, ascendant behavior, selfishness, egocentrism, destructiveness, sex antagonism & prejudice.

Early intervention means identifying and providing effective early support to children who are at risk of poor outcomes. Effective early intervention works to prevent problems occurring, or to tackle them head-on when they do, before problems get worse. Early intervention services can change a child's developmental path and improve outcomes for children, families, and communities.

Families benefit from early intervention by being able to better meet their children's needs from an early age and throughout their lives. Early intervention can help children and young people to develop the skills they need to live happy, healthy and successful lives. It can improve the quality of children's home lives and family relationships, increase educational attainment and support good mental health.

School Age refers to the age range of children normally attending school. It is the period of late childhood and extends from the age of six years to the time the individual becomes sexually mature. To many parents, it is the troublesome age. Educators call this period as the elementary school age and psychologists term this age as gang age. Late Childhood demands developing fundamental skills in reading, writing and calculating, developing concepts necessary for everyday living, learning physical skills necessary for ordinary games, building a wholesome attitude toward oneself as a growing organism, learning to get along with age-mates, beginning to develop appropriate masculine or feminine social roles, developing a conscience, a sense of morality, and a scale of values, developing attitudes toward social groups and institutions and achieving personal independence.

Special Education requires continuum of Special Education services provisions or alternative programmes or variety of special treatment for students with special need in terms of their education and adjustment for their welfare, progress and development. In many countries special day schools for various categories of children with special needs have been set up. In large cities, special day schools cater to the needs of one type of disability but in small cities they are meant for two disabilities also.

A resource room is a separate, remedial classroom in a school where students with special needs are given direct, specialized instruction and academic remediation as individuals or in groups. A resource teacher's role is open ended. The resource teacher is a trained specialist who works with, and acts as a consultant to other teachers, providing materials and methods to those who are having difficulties within the regular classroom.

Inclusive Classroom - In inclusive education, children with disabilities are full time members of the general education classroom. The stress in the inclusive education is a providing the support necessary so that children can participate in a meaningful way in the ongoing classroom activities. Support may include adaptation of the curriculum, materials, or instructional techniques.

Multidisciplinary Team is a team approach, including the integration of values, perspective, and ideas that gives an accurate decision-making process in identifying the academic, social, and vocational needs of the child to develop an individualized educational program that will meet the needs of that child with disability.

Members would share responsibility and have to maintain an open communication in the form of collaboration.

Transition services are a coordinated set of activities for a student with disabilities designed within an outcome oriented process. It promotes movement from school to post school activities. The main aim of transition planning is to offer services to empower the persons with disabilities with necessary skills and competencies in order to lead a better life in adulthood. The rationale behind the transition programme is to ensure the quality of life persons with disabilities by bridging the gap between the school and post school activities. A transition portfolio is a strategy that documents critical information about a student.

Career development is the lifelong process of managing learning, work, leisure, and transitions in order to move toward a preferred future. Career development is the series of activities or the on-going/lifelong process of developing one's career. It involves training on new skills, moving to higher job responsibilities, making a career change within the same organization, moving to a different organization or starting one's own business.

Vocational training for persons with disabilities should not start at the school leaving age; rather, it should begin early and continue through the school years. Early vocational emphasis means that one selects appropriate vocational objectives for training at each age level. To prepare the persons with intellectual disability to work in it is necessary to provide them with exposure to and experience in dealing with the demands and expectations of these environments. Work behavior should take place in real job situation in the community. **Individualized Transition Plan,** or ITP, is a **plan** based on informal and formal assessments that is used to identify the desired and expected outcomes by students and their families once they leave school as well as the supports needed to achieve these outcomes. Individualized Transition Plan focus mainly on (1) Job analysis, (2) Job matching and (3) job training of persons with disabilities / special needs. It insists in identifying possible jobs in consultation with parents / care taker. It is also

suggested that the transition plan should be the part of ITP, which avoids unnecessary confusion of parents / care taker about the post school programmes of their children.

Vocational development is the process of developing and implementing a self-concept. As the self-concept becomes more realistic and stable, so does **vocational** choice and behavior. **Vocational skills** for special education is designed to prepare students for life beyond the classroom setting. The teaching of vocational skills is intended to set up the student for success after secondary education. Through vocational skills training students will learn how to prepare for a job, find a job, apply for a job and excel at a job.

Employment is the single most important concern of those who work with older people who are disabled. School personnel report that adults with disabilities need vocational training, placement and evaluation services more than they need transition or post employment services.

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Supported employment is a relatively new concept that is designed for individuals with disabilities who need help in finding, performing, and holding a job. Professionals in supported employment activities spend most of their time at the job sites where people with disabilities work.

Self employment becomes a choice where the parents or family members have the resources to provide support to run a small scale business at home/some specified place and hence persons with special need are encouraged for this type of employment. In this situation, these individuals can be trained for carrying out simple activities in pre determined business.

During the past decade there has been a noticeable increase in the number and types of occupations the qualified special need person - specially person with intellectual impairment are able to perform.

Follow up is a continuation or repetition of something that has already been started or done.

The agency which referred the worker with intellectual impairment to an employer should be able to furnish follow-up service or guidance.

Inclusion in education refers to a model wherein students with special needs spend most or all of their time with non-special (general education) needs students. It arise in the context of special education with an individualized education program and is built on the notion that it is more effective for students with special needs to have said mixed experience for them to be more successful in social interactions leading to further success in life. Students in an inclusive classroom are generally placed with their chronological age-mates, regardless of whether the students are working above or below the typical academic level for their age. Also, to encourage a sense of belonging, emphasis is placed on the value of friendships. An inclusive culture involves the full and successful integration of diverse people into a workplace or industry. Additionally, inclusive cultures extend beyond basic or token presence of workers who have disabilities.

3.9 Unit end exercises

Answer the following questions

Write down the main characteristics of Infancy.

What are the major areas of development in early childhood?

Why early intervention is necessary?

What do you understand by the term Multidisciplinary team collaboration?

Explain school age.

Write down the role of special teacher.

Why resource room is necessary?

Explain the main features of ITP.

Elaborate the different models of employment.

Why follow up is necessary?

What are the major issues in inclusion?

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Unit 4 □ Use of Assessment Information

Structure

4.1 Introduction

We have learnt about the various assessments, types, approaches and tools for assessment earlier. The information thus gained through the assessment processes have to be utilized meaningfully for programme planning for persons with mental retardation. Some of the assessment details are collected from the reports of experts other than the special educator including medical doctors, psychologists, physio therapists, occupational therapists, speech pathologists and social workers. Assessment directly related to teaching is carried out by the teacher. All this information should be consolidated, interpreted and programme planned using holistic approach. This requires alertness, certain skills and competencies and objectivity on the part of the teacher or the trainer. We will see in the following pages, how to use the various assessment information for comprehensive programme planning for persons with mental retardation.

4.2 Objectives:

After going through this unit the learner will

- Differentiate primary and secondary sources of assessment from a teacher's perspective;
- Relate the relevance of medical investigation and diagnosis to decision making for programme planning;
- Clarify how decision making depends on learner characteristics;
- Discuss how psychological assessments including intellectual, adaptive, behaviour, achievement personality and aptitude assessments are essential for educational programme planning and decision making;
- State the purposes of educational assessments; and
- Name and briefly discuss the different areas of vocational assessment;

4.3 Use of assessment information-medical, Special Educational, Psychological, Therapeutic and Vocational

You would have understood that there are varied types of assessments, each one with a specific objective and purpose. You have learnt that screening helps in suspecting

and short listing persons who need a detailed assessment for confirming of a condition. Further, each assessment leads to specific outcome, depending on the purpose for which it is conducted. You have seen that diagnostics investigations are different from assessment for programme planning. When you meet a parent who brings the child for the first time to you seeking help, he may have a file or a folder with considerable information about the child in references, child in reference, since his birth or since a problem was suspected. It may contain medical reports, lab investigations, scans and x-rays, psychological reports, therapist's reports, alternative treatments such as nature cure, homeopathy or ayurdevic treatments and many more. Some may come to you for the first time with no investigations done at all. The extent of reports carried by the family will depend on their awareness, known risk factors even before birth or nature of the disability or the absence of visible symptoms, affordability of the family to seek help, trust and faith in the various systems by the family and such other factors. However , what is important for us here is what do you do with all these reports? How do you decide what is relevant to you as an educator? How do you decide how to proceed further? What more assessment needs to be done? – all with the objective to help the present understand the condition of their child accept reality an join you in planning the teaching programme for the child. It is very important that the assessments are interpreted and used wisely to achieve this objective. Let us see how we would do this.

Primary and secondary sources of information

To be able to interpret assessment data effectively, we must understand the context in which the assessment is carried out and the social and environmental factors that influence the assessment results. (Lyon, 1994). Therefore, the assessment reports in hand must be considered with these aspects in mind. While conducting the assessment too, such details should be taken care of.

When you conduct the assessment by yourself, using suitable tools and techniques you are gathering direct information from the client and the informant. It can be primary sources and secondary sources.

Decision Making:

As noted by Salvia and Ysseldyke (2007), each regular and special education teacher makes literary hundreds of professional decisions every day . These decisions amy be regarding,

- Placement- general and special education setting
- Instructional management
- Academic decision – content and process of teaching
- Therapeutic supports
- Participation issues with parents
- Managing contingencies

Decision making and learner characteristics:

Certain decisions are to be made carefully and consciously that concern the future planning for the students. This includes interpreting and using the assessment information from various experts and the teachers assessment itself. These decision largly depsnd om learner characteristics which differ among individuals.

The role of medical investigation in diagnosis and decision making:

- Detection and diagnosis of the condition
- Prognosis in certain conditions
- Decision about problem behaviours
- Prevention of disability
- Medical impact of the conditions
- Seizure disorders

Psychological Assessment and their role in educational planning

You are well aware that psychological assessments are the nerve centre in diagnosis of persons with intellectual disability. Psychological assessment reports relevant to as special educators including reports of

- Intellectual assessment
- Adaptive behaviours
- Achievement
- Aptitude
- Personality

- Family needs and involvement of the family

Educational Assessment:

Educational assessment is directly relevant to the programming and is essentially carried out by the teacher. Various educational assessment and evaluation tools and techniques which direct your programme planning.

Interpretation of Educational assessment has two major purposes:

- Placement decision
- Programme planning

Vocational Assessment

Education is a means to independent living and economic independence to everyone including persons with disabilities. To achieve this, vocational training and placement is imperative. When a student is around 15 years of age, preparation for suitable vocation should be the focus of curriculum planning os that when he is 18 years, he will be ready for a vocation. The various assessments relevant to vocational training and placement include:

- Adaptive Behaviour
- Ability and current level of functioning
- Aptitude
- Occupational
- Transitions
- Ecological
- Life skills
- Family resources and concerns

4.4 Interpretation of Assessment Information to develop training goals

Giving meaning to different outcomes of the training programmes is essential to perceive the training package. Interpretation is a process of perceiving the pros and cons of training programmes. Interpretation helps the educative, the parents and other

professional associates with the training programme to understand are relevant factors influencing the training programme

Level of Interpretation of Assessment

- Level-I: Interpretation during the initial assessment
- Level-II: Interpretation during the training programme
- Level-III: Interpretation after the completion of training programme

Level-I : Interpretation during the initial assessment

When an individual training programme is decided for a student, it is essential to collect information about the student's background, student's present performance, student's ability and resources to be mobilized to accelerate the training programme. Information collected from all the above factors must be interpreted to see all possible positive factors that could be integrated for the training programme.

- Interpretation of Personal Data
- Interpretation of Student's Ability
- Interpretation of Student's Performance
- Interpretation of Resources

Interpretation of Personal Data

- Prenatal, Natal, Post-natal History
- Education History
- Medical History
- Immunization Details
- Developmental History

Interpretation of Student's Ability

It is essential to understand the student's ability in terms of intelligence and aptitude. Assessment also should focus to understand the interest and attitude of the student for different training programmes. The student's overall ability and specific ability must be assessed and interpreted to decide specific task for training.

Interpretation of Student's Performance

Student's performance must be understood from different angles. Usually the performance is elicited by using a behavioural scale during assessment. Other than the result of the behavioural scale, the past opportunity given to the student must be noted. The background information of the student like the family income, education, involving in training, and exposure and socio-cultural background must be understood for giving a conclusive statement on performance.

Interpretation of Resources

Data must be collected to understand the resources available for development of the student and training to the student. For example, toilet training to a ten years mentally retarded boy, it is essential to know a few aspects like:

- The type of toilet used by the family
- The person would be involved in training
- The cultural believe for toileting
- Cleaning system after toileting etc.

Developing teaching materials for the student must be based on the resources of the parents, if the parents are affordable to purchase highly costly materials then it will be worthwhile to prescribed such materials. On the other hand, the poor people could be advised to develop teaching materials in local available materials with less expenditure.

Level-II: Interpretation during the training programme

- It is essential to see the speed of training, and other relevant factors influencing training during different phases of the programme.
- Understanding the result, the methods, the efficiency of materials, and the usefulness of techniques is essential to enhance the training programme.
- Hence, it is essential to interpret the intermittent improvement, and other associated factors for training programme.
- It must noted that, interpretation during the training programme would help to bring changes in the training pragramme as per the requirement.

Level-III: Interpretation after the completion of training programme

After the completion of training programme, it is essential to review and understanding the various factors influenced the training programme. Interpretation of the overall result, specific result i.e. result in each skills, the methods used form training programme such as: a) play way method, b) structured method, c) project method and techniques used for training programme. It is essential to understand the whole scenario of the training programme. It also give idea for deciding the further training programme to be given to the student.

4.6 Writing of Assessment Report: for administrative purpose, for educational programming, for referral and for alternative placement

The dictionary meaning of 'report' is to give a spoken or written account of something providing official information or evidence (Oxford Dictionary, 2005). A report can be defined as a testimonial or account of some happening. Report is a self-explanatory statement of facts relating to a specific subject and serves the purpose of providing information for decision making and follow up actions. It is a systematic presentation of ascertained facts about a specific event / subject. Report is a summary of findings and recommendations about a particular matter / problem. Report is for the guidance of higher authorities. Reports facilitate timely decisions and follow up measures. In today's world, reports play a crucial role.

4.6.1 Purpose of a report: writing to be read

A key thing to keep in mind right through your report writing process is that a report is *written to be read*, by someone else. This is the central goal of report-writing. A report which is written for the sake of being written has very little value. Before you start writing your report, you need to have in mind the *intended audience*. In the narrowest of possibilities, your report is meant for reading by yourselves, and by your advisor/ instructor, and perhaps by your evaluation committee. This has value, but only short-term. The next broader possibility is that your report is readable by your peers or your juniors down the line. This has greater value since someone else can continue on your work and improve it, or learn from your work. In the best case possibility, your report is of publishable quality. That is, readable and useful for the technical community in general.

In special education, there are number of reports written for numerous purposes by varied professionals.

Writing report for administrative decision

- Diagnosis and certification
- IQ assessment
- Placement in appropriate schools
- Eligibility to various benefits and concessions offered by the government
- Access to suitable adaptive devices for independent mobility, communication and learning
- Establishing rights.

Writing reports for educational programming

This report is solely done by the teacher at the initial stage, formative stage and summative stage for promotion to next level or for future use. A report that is periodically written by all the teachers in regular or special school is the progress report. For a student with special needs, make sure that your report is not only quantitative (percentage or other form of numerical values) but also qualitative, narrating the progress in each domain/subject as the case may be.

Writing reports for alternative placement

As notated by Raymonds (2008), the law demands that every child should have a careful assessment of strengths and needs with respect to participation in general education curriculum., goals and objectives set to enable the student to show progress in that curriculum and finally decisions on where the services are to be provided for maximum benefit to the student. These placement decisions are very carefully made by the team and reviewed periodically.

Writing reports for referral

A child may come to you referred by a professional or others or you may have to refer the child for further assessment or programmes. When cases are referred for certification or services, there should be a proper format and system so that the efforts are documented. This will also ensure receiving feedback from the referred agency. Referrals are made in the beginning at the time of initial team assessment, during the

implementation of the educational programmes and /or on the completion of school admission. Proper reporting is required for referring the child to the others professional.

4.6.2 The essentials of good/effective report writing

1. Know your objective, i.e., be focused.
2. Analyze the niche audience, i.e., make an analysis of the target audience, the purpose for which audience requires the report, kind of data audience is looking for in the report, the implications of report reading, etc.
3. Decide the length of report.
4. Disclose correct and true information in a report.
5. Discuss all sides of the problem reasonably and impartially. Include all relevant facts in a report.
6. Concentrate on the report structure and matter. Pre-decide the report writing style. Use vivid structure of sentences.
7. The report should be neatly presented and should be carefully documented.
8. Highlight and recap the main message in a report.
9. Encourage feedback on the report from the critics. The feedback, if negative, might be useful if properly supported with reasons by the critics. The report can be modified based on such feedback.
10. Use graphs, pie-charts, etc to show the numerical data records over years.
11. Decide on the margins on a report. Ideally, the top and the side margins should be the same (minimum 1 inch broad), but the lower/bottom margins can be one and a half times as broad as others.
12. Attempt to generate reader's interest by making appropriate paragraphs, giving bold headings for each paragraph, using bullets wherever required, etc.

4.7 Implications of the above for Inclusion

4.7.1 Inclusive Education and Assessment

The Individuals with Disabilities Act Amendments of 1997 (IDEA 97) defines inclusion as the participation of children and youth with disabilities in the general education classroom and the general curriculum with appropriate aids and services.

Inclusion means full inclusion of children with diverse abilities (that is, both giftedness and disabilities) in all aspects of schooling that other children are able to access and enjoy. It involves 'regular' schools and classroom genuinely adapting adn changing to meet the needs of all children as well as celebrating and valuing differences (Loreman and Deppeler 2001).

The related concept of full inclusion refers to full membership in the general classroom with the full supports necessary to make inclusion successful (Sailor et al., 1993). The term full supports describes the importance of providing necessary support services in general education classrooms to ensure a quality educational programme.

Why do we modify assessment for students with disabilities in inclusive settings?

- Experts expect that inclusion will result in school classrooms composed of much more diverse groups of students (Putnam et al., 1995). As a result teachers need to develop new instructional methodologies and assessment procedures that respond to the greater diversity of student needs.
- Although assessment in inclusive settings requires changes, many current evaluation practices work equally well in inclusive and noninclusive educational settings. For eg. Many curriculum based assessment procedures such as teacher made testing, grading of homework assignments, grading of classwork already occur in the same way in most classrooms. In fact, teachers should use established assessment procedures whenever possible as long as they meet the increasingly diverse needs of the students.

4.7.2 Assessment Issues in General Education

- When asked about inclusion, many general education teachers may feel that required modifications for students with special need lead to a watered-down curriculum.
- Special education teachers often express concerns about the emphasis in general education on testing as a means of accountability. This causes pressure on general educators to make sure that their students perform well on tests. Because students with special needs tend to perform poorly on tests, general educators may be hesitant to accept inclusion due to fears about a negative impact on the testing performance of the total class.

Educators who are teaching students with special needs in inclusive settings are still in the process of developing the best possible solutions to these issues and concerns.

4.7.3 New approaches to assessment in inclusive settings

4.7.3.1 Team assessment:

One of the most useful assessment approaches in inclusive classroom is team assessment, which is a process that involves all teachers in the evaluation process, not just special education teachers in particular who concern about testing and grading students with disabilities are.

- Successful inclusion depends in part on the willingness of teachers to modify their measurement procedures are all different (Tiegerman-Farber & Radziewicz, 1998).
- If most of the teachers are willing to collaborate as coteachers in developing and implementing new assessment techniques that benefit all students while accommodating the needs of students with disabilities.
- One of the team assessment elements that teachers should consider is how well the members of the assessment team work together.
- Active participation of all team members in gathering and interpreting assessment data is a key element. All the team members should help interpret assessment data. The benefit of team assessment is more complete evaluation of student needs within the most appropriate educational environment.
- Team assessment requires a substantial amount of time, professional commitment and interpersonal communication (Coufal, 1993).

4.7.3.2 Cooperative learning assessment

Cooperative learning is an instructional strategy that works well in inclusive settings. Research studies by Pomplan (1997) and Carlson et al. (1988) provide further evidence to support the use of cooperative learning in inclusive classrooms. These studies suggest that nonroutine, open ended tasks maximize the participation of students with disabilities in heterogeneous cooperative groups.

When teachers use cooperative learning, they are responsible for ensuring that appropriate assessment takes place. The steps in assessing cooperative learning are as follow:

- Specify the objectives
- Develop the assignment
- Determine grading criteria
- Explain the assignment and share the grading criteria with the students
- Monitor the efforts of the cooperative groups
- Interfere and provide support as necessary
- Evaluate the results

Teachers may use several assessment strategies to evaluate results, including the following:

- Observing group performance as it occurs
- Interviewing individual students and groups of students
- Evaluating individual and group performance on class work and homework.
- Grading teacher-made tests given to individuals or groups.

4.7.3.3 Peer assessment of class presentation:

Any activity done by a student can be evaluated by peers as well as the teacher. One way to encourage group interdependence and to foster peer assessment is to structure classroom activities / presentations so that all members must learn the activity / material being presented.

- The rating system should include items for assessing the quality of the presentation, the interest generated by the presentation, the organization, creativity, originality and peer participation.

4.7.3.4 Group assessment:

- In real life the success of an organization many a time depends upon the team performance rather than the success of an individual. For this reason, cooperative learning assignments in school should require group reports, exhibits, performances and presentations in which the students work together and are graded as a group.

- Group celebration should occur at the end cooperative learning lessons after completion of assessment and grading. Group celebrations give students the opportunity to salute their success and reflect on how well they collaborated to achieve their learning goals.
- Recognizing the learning efforts of group members and their contribution to the learning of others is an important element in rewarding group interdependence.

4.7.3.5 Peer tutoring assessment:

- Peer tutoring is an instructional strategy in which a student tutor teaches another student in a tutor-tutee relationship designed to promote academic learning and social skill development.
- Successful peer tutoring involves planning, tutor training, teacher support and assessment. Some teachers assess the progress of tutees by having complete daily progress sheets.

4.7.3.6 Play-Based assessment:

This method is highly recommended for assessing all the developmental areas and there is a highly likelihood that the child will demonstrate his / her true abilities in this setting. Play-Based assessment yield information to develop a plan for intervention to make the recommendations for goals or out-comes for the child and family and assessment team.

Psychologist Diane Ashton describes the following categories of play:

- Solitary play (all ages): The child plays alone. This type of play is not necessarily an indicator of immaturity. High-level play may occur.
- Onlooker play (all ages): The child watches other people play. This type of play appears to be a passive process whereby the child observes the play levels of other children. The examiner should use caution in interpreting this type of play.
- Parallel play (1-3 yrs.): Two children pursue similar activities but do not always engage in eye-contact or social behavior. Children play alongside each other.
- Associative play (2-3 yrs.): Children engage in same or similar activity and may exchange toys or make occasional comments to each other. This type of play lacks organization.

· Cooperative play (4-5 yrs.): This type of play is organized play with cues, rules and individual functions well defined.

There are specific play assessment instruments that might be used by the practitioner. Eg.- *play observation scale* (Rogers, 1986) which describes a 10-step hierarchy that focuses on language, cognitive and social aspects of play.

4.7.3.7 Portfolios and assessment:

A student portfolio is a systematic collection of student work and related material that depicts a student's activities, accomplishments and achievements in one or more school subjects.

Portfolio assessment:

It is an ongoing process that captures the many activities and accomplishments associated with reflective teaching and learning that occur in portfolio-based instruction. By evaluating progress using a collection of authentic samples of student work, portfolio assessment provides an ongoing record of student performance and mastery of specific competencies (Vavrus, 1990).

Usefulness of portfolios for the students with special needs:

- Portfolios encourage individualization in response to the special learning needs of each student.
- Portfolio assessment enhances student motivation.
- It promotes mastery learning.
- It is an ideal way to evaluate the skills of students with special needs.

Process & Product portfolios:

- A process portfolio documents the stages of learning and provides a progressive record of student growth.
- A product portfolio demonstrates mastery of a learning task or a set of learning objectives and contains only the best work.

Advantages of portfolio assessment:

- Providing flexibility in measuring how students accomplish their learning goals.

- Enabling teachers and students to share the responsibility for setting learning goals and for evaluating progress toward meeting those goals.
- Providing a process for structuring learning in stages.
- Enabling measurement of multiple dimensions of student progress by including different types of data and materials.

Disadvantages of portfolio assessment:

- Requiring extra time to plan an assessment system and conduct the assessments.
- Gathering all of the necessary data and work samples can make portfolios bulky and difficult to manage.
- Scoring portfolios involves the extensive use of subjective evaluation procedures such as rating scales and professional judgments and this limits reliability.

4.7.3.8 Performance assessment:

- Performance assessments provide greater realism of tasks in the following forms:

1. Solving realistic problems.
2. Oral or psychomotor skills without a product.
3. Writing or psychomotor skills with a product.

- Restricted performance tasks are highly structured and limited in scope. Extended performance tasks are typically poorly structured and broad in scope.

Strengths

1. Provides a more natural, direct and complete evaluation of some types of reasoning, oral and physical skills.
2. Provides greater motivation for students by clarifying goals and making learning more meaningful.
3. Encourages the application of learning to “real life” situations.

Limitations

1. Requires considerable time and effort to use.
2. Evaluation must frequently be done individually, rather than in groups.

4.7.3.9 Modifying Teacher-Made Tests:

Teacher made tests frequently fail to give students with behavior and learning disabilities the opportunity to demonstrate what they have learned. This occurs because students with disabilities may have deficit in attention, memory, organization, reading or writing that hinder performance on teacher-made tests. For these reasons teachers need to incorporate test design accommodations that minimize the effect of attention and memory problems. Test design accommodation includes the following:

Test Directions-

In some situations, students with special needs may receive poor marks on a test due to difficulty in following the test directions rather than lack of competency to perform the test content. Teachers can minimize this problem by using cues include color coding, using symbols etc.

Response Modes-

Teachers may need to modify the response modes of test items for students with written or verbal communication difficulties. For eg. Students can record responses on an audiocassette or can give oral exam.

Test items-

Teachers can improve student performance by doing these things:

- Keeping the response choices as brief as possible.
- Avoiding potentially confusing choices such as all of the above or none of the above.
- Limiting the number of choices to no more than four items.

4.8 Let us Sum up

- Each child with mental retardation is unique in nature. Special education can identify the unique need of each child through proper assessment and plan intervention activities as per the requirement. Assessment is a pivotal and the first step of rehabilitation programme for the children with Mental Retardation.
- Assessment is collection and organization of information for making administrative and instructional decisions.

- Assessment is carried out for various purposes such as (a) screening and identification, (b) determining and evaluation of teaching programmes and strategies, (c) determination of current level performance and educational needs, (d) classification and programme placement, (e) development of IEPs and (f) evaluation of the effectiveness of intervention programme.
- The different areas of assessment are clinical assessment, psychological assessment, educational assessment behavioural assessment and ecological assessment.
- Clinical assessment is a part of assessment in the process of diagnosis of persons with mental retardation. It is carried out to identify the cause of mental retardation, refer to further investigations to confirm the cause and other anomalies and to plan and evaluate treatment.
- Psychological assessment is the process of systematic collection, organization and interpretation of information about a persons and his situation. It encompasses assessment of the three major aspects of the mind namely, cognition, conation and affection.
- Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with the environment. Intelligence tests, developmental schedules and adaptive behavioural scales are used in measuring the intelligence.
- Educational assessment helps to find out abilities of the student and plan teaching programme accordingly. Norm referenced tests and criterion referenced tests are used in educational assessment.
- Behavioural assessment is systematic repeated recording of predefined behavioural parameters of individuals, with a purpose of either identifying functional stimuli that maintain certain behaviours or demonstrating systematic behavioural changes as a function of planned intervention.
- Ecological Assessment stresses the importance of curricular items based on environment – instead of the " watered down curriculum". This approach emphasizes the inclusion of those content areas necessary for independent living in his/ her environment. It gives emphasize the assessment of environment of the CWSN rather than child with mental retardation.

- Interpretation is a process of perceiving the pros and cons of training programme. There are 3 levels of Interpretation
- Level-I: Interpretation during the initial assessment
- Level-II: Interpretation during the training programme
- Level-III: Interpretation after the completion of training programme
- Reports are generated for various purposes. Some of the important purposes for which reports are generated include administrative decisions, educational programming, referrals and for alternative placement.
- Experts expect that inclusion will result in school classrooms composed of much more diverse groups of students (Putnam et al., 1995). As a result teachers need to develop new instructional methodologies and assessment procedures that respond to the greater diversity of student needs.

4.9 Unit end exercises

- Collect medical and psychological reports of 3 children having intellectual disability. Identify the purpose of the reports, assessment carried out and recommendations made. Write how you would use the information for programme planning
- Collect the educational assessment reports of 3 children who are enrolled at school for at least 3 years. Collect the reports from the time of admission to the latest one. Critically analyse the purpose, strengths and gaps in the assessment reports.

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The End

Unit 5 □ Emerging and Future Issues

Structure:

5.1 Introduction

Persons with disabilities often are excluded from the mainstream of the society and denied their human rights. Discrimination against persons with disabilities takes various forms, ranging from invidious discrimination, such as the denial of educational opportunities, to more subtle forms of discrimination, such as segregation and isolation because of the imposition of physical and social barriers. Effects of disability-based discrimination have been particularly severe in fields such as education, employment, housing, transport, cultural life and access to public places and services. This may result from distinction, exclusion, restriction or preference, or denial of reasonable accommodation on the basis of disablement, which effectively nullifies or impairs the recognition, enjoyment or exercise of the rights of persons with disabilities. Despite some progress in terms of legislation over the past decade, such violations of the human

rights of persons with disabilities have not been systematically addressed in society. Most disability legislation and policies are based on the assumption that persons with disabilities simply are not able to exercise the same rights as non-disabled persons. Consequently the situation of persons with disabilities often will be addressed in terms of rehabilitation and social services. A need exists for more comprehensive legislation to ensure the rights of disabled persons in all aspects - political, civil, economic, social and cultural rights - on an equal basis with persons without disabilities. Appropriate measures are required to address existing discrimination and to promote thereby opportunities for persons with disabilities to participate on the basis of equality in social life and development. Legislation at country level is fundamental in promoting the rights of persons with disabilities. While the importance - and increasing role - of international law in promoting the rights of persons with disabilities is recognised by the international community, domestic legislation remains one of the most effective means of facilitating social change and improving the status of disabled persons. International norms concerning disability are useful for setting common standards for disability legislation. Those standards also need to be appropriately reflected in policies and programmes that reach persons with disabilities and can effect positive changes in their lives. Through out history, people with disability have been hidden a way or subjected to abuse, ignorance and prejudice. The power of disability advocacyover the past century has radically shifted thinking to recognise the rights of all people with disability to live in the community, with choices equal to others. Disability advocacy came from the disability rights movement.Gender is a social construct where as sex of a person is a biological status. Gender diversity refers to the difference in the societal outlook to people around vis a vis their sex. Right from ancient times, a female has been considered as the weaker of the two. A female, as a child, is to be protected by her Father, as a wife, by her husband and as an old mother, by her son. Her role is to bear children and look after everyone in the family. A male is looked upon as the bread winner, protector and savior of the family. From this social discriminatory position of males and females, the life experiences of a girl and boy have been very different simply because of their sex. This difference immensely contributes to diversity in our society to varying degrees across regions.

5.2 Objectives

After completingthis unit, the learners will be able to:

- Know the concept of human rights and Indian and international legislation policies
- Understand about the Advocacy of disability

- Identify problem related to socio cultural and economic gender issues
- Understand about implications in inclusion
- To gain knowledge about different uses of technology
- To gain knowledge about advancement of technology

5.3 Policies for persons with disabilities in India

India has one of the more developed national policy frameworks for disability of developing countries, though there remains scope for improvement, in particular at the sub-national level. However, as in many areas of social policy, challenges of institutional capacity and coordination have contributed to implementation that frequently leaves much to be desired.India has a long experience of policy and practice with respect to disability, including collection of census information on disability from as early as 1872, and special schools and institutions operating since the 19th century. Like many countries, it also had specific provision for people with mental illness and retardation under the Indian Lunacy Act of 1912. The Constitution of India acknowledged also general state obligations to PWD in Article 41, and the State List under "Relief of the disabled and unemployable". Subsequently, specific measures such as employment concessions were introduced from the 1960s. 2 However, it was not until the 1980s that policy commitment to full participation of PWD in Indian society evolved. The outcomes of this policy shift were realized in several key pieces of legislation3 : (i) the Mental Health Act, 1987; (ii) the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (PWD Act); (iii) the Rehabilitation Council of India Act, 1992 and amended in 2000 (RCI Act); and (iv) the National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999 (National Trust Act). The cornerstone among these is the PWD Act, which is discussed in the following section.

5.3.1 The Mental Health Act, 1987

An Act to consolidate and amend the law relating to the treatment and care of mentally ill persons, to make better provision with respect to their properly and affairs and for matters connected therewith or incidental thereto.

Statement of Objects and Reasons of Act 14 of 1987

- The attitude of the society towards persons afflicted with mental illness has changed considerably and it is now realised that no stigma should be attached to such illness as it is curable, particularly, when diagnosed at an early stage. Thus the mentally ill persons are to be treated like any other sick persons and the environment around them should be made as normal as possible.
- The experience of the working of Indian Lunacy Act, 1912 has revealed that it has become out-moded. With the rapid advance of medical science and the understanding of the nature of malady, it has become necessary to have fresh legislation with provisions for treatment of mentally ill persons in accordance with the new approach.
- It is considered necessary -

1. To regulate admission to psychiatric hospitals or psychiatric nursing homes of mentally ill-persons who do not have sufficient understanding to seek treatment on a voluntary basis, and to protect the rights of such persons while being detained;
2. To protect society from the presence of mentally ill persons who have become or might become a danger or nuisance to others;
3. To protect citizens from being detained in psychiatric hospitals or psychiatric nursing homes without sufficient cause;
4. To regulate responsibility for maintenance charges of mentally ill persons who are admitted to psychiatric hospitals or psychiatric nursing homes;
5. To provide facilities for establishing guardianship or custody of mentally ill persons who are incapable of managing their own affairs;
6. To provide for the establishment of Central Authority and State Authorities for Mental Health Services;
7. To regulate the powers of the Government for establishing, licensing and controlling psychiatric hospitals and psychiatric nursing homes for mentally ill persons;
8. To provide for legal aid to mentally ill persons at State expense in certain cases.

5.3.2 The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995

The government of India has put in place an Act for the disabled to make sure the disabled also form an important part of nation building. The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 came into force on February 7, 1996. It is a significant step which ensures equal opportunities for the people with disabilities. The Act provides for both the preventive and promotional aspects of rehabilitation like education, employment and vocational training, reservation, research and manpower development, creation of barrier- free environment, rehabilitation of persons with disability, unemployment allowance for the disabled, special insurance scheme for the disabled employees and establishment of homes for persons with severe disability etc.

The main provisions of the Act are:

Prevention and early detection of disabilities

- Surveys, investigations and research shall be conducted to ascertain the cause of occurrence of disabilities
- Various measures shall be taken to prevent disabilities. Staff at the Primary Health Centre shall be trained to assist in this work
- All the Children shall be screened once in a year for identifying 'at-risk' cases
- Awareness campaigns shall be launched and sponsored to disseminate information
- Measures shall be taken for pre-natal, peri natal, and post-natal care of the mother andchild.

Education

- Every child with disability shall have the rights to free education till the age of 18 years in integrated schools or special schools.
- Appropriate transportation, removal of architectural barriers and restructuring of modifications in the examination system shall be ensured for the benefit of children with disabilities
- Children with disabilities shall have the right to free books, scholarships, uniform and other learning material

- Special Schools for children with disabilities shall be equipped with vocational training facilities
- Non-formal education shall be promoted for children with disabilities
- Teachers' Training Institutions shall be established to develop requisite manpower.
- Parents may move to an appropriate forum for the redressal of grievances regarding the placement of their children with disabilities

Employment

3% of vacancies in government employment shall be reserved for people with disabilities, 1% each for the persons suffering from:

Blindness or Low Vision

Hearing Impairment

Locomotor Disabilities & Cerebral Palsy

Suitable Scheme shall be formulated for The training and welfare of persons with disabilities The relaxation of upper age limit Regulating the employment Health and Safety measures and creation of a non- handicapping, environment in places where persons with disabilities are employed Government Educational Institutes and other Educational Institutes receiving grant from Government shall reserve at least 3% seats for people with disabilities. No employee can be sacked or demoted if they become disabled during service, although they can be moved to another post with the same pay and condition. No promotion can be denied because of impairment.

Affirmative Action

Aids and Appliances shall be made available to the people with disabilities. Allotment of land shall be made at concessional rates to the people with disabilities for:

- House
- Business
- Special Recreational Centres
- Special Schools
- Research Schools
- Factories Entrepreneurs with Disability

Non-Discrimination

- Public building, rail compartments, buses, ships and air-crafts will be designed to give easy access to the disabled people
- In all public places and in waiting rooms, the toilets shall be wheel chair accessible. Braille and sound symbols are also to be provided in all elevators (lifts).
- All the places of public utility shall be made barrier- free by providing the ramps

Research and Manpower Development

- Research in the following areas shall be sponsored and promoted
- Prevention of Disability
- Rehabilitation including community based rehabilitation
- Development of Assistive Devices
- Job Identification
- On site Modifications of Offices and Factories

Financial assistance shall be made available to the universities, other institutions of higher learning, professional bodies and non-government research- units or institutions, for undertaking research for special education, rehabilitation and manpower development

Social Security

- Financial assistance to non-government organizations for the rehabilitation of persons with disabilities
- Insurance coverage for the benefit of the government employees with disabilities.
- Unemployment allowance to the people with disabilities who are registered with the special employment exchange for more than a year and could not find any gainful occupation

Grievance Redressal

- In case of violation of the rights as prescribed in this act, people with disabilities may move an application to the
- Chief Commissioner for Persons with Disabilities in the Centre, or
- Commissioner for Persons with Disabilities in the State.

5.3.3 The Rehabilitation Council of India(RCI) 1992

The Rehabilitation Council of India(RCI) was set up as a registered society in 1986.On September,1992 the RCI Act was enacted by Parliament and it became a Statutory Body on 22 June 1993.The Act was amended by Paliament in 2000 to make it more broadbased.The mandate given to RCI is to regulate and monitor services given to persons with disability,to standardise syllabi and to maintain a Central Rehabilitation Register of all qualified professionals and personnel working in the field of Rehabilitation and Special Education.The Act also prescribes punitive action against unqualified persons delivering services to persons with disability.

Objectives

1. To regulate the training policies and programmes in the field of rehabilitation of persons with disabilities
2. To bring about standardization of training courses for professionals dealing with persons with disabilities
3. To prescribe minimum standards of education and training of various categories of professionals/ personnel dealing with people with disabilities
4. To regulate these standards in all training institutions uniformly throughout the country.
5. To recognize institutions/ organizations/ universities running master's degree/ bachelor's degree/ P.G.Diploma/ Diploma/ Certificate courses in the field of rehabilitation of persons with disabilities
6. To recognize degree/diploma/certificate awarded by foreign universities/ institutions on reciprocal basis
7. To promote research in Rehabilitation and Special Education
8. To maintain Central Rehabilitation Register for registration of professionals/ personnel
9. To collect information on a regular basis on education and training in the field of rehabilitation of people with disabilities from institutions in India and abroad
10. To encourage continuing education in the field of rehabilitation and special education by way of collaboration with organizations working in the field of disability.

11. To recognize Vocational Rehabilitation Centres as manpower development centres
12. To register vocational instructors and other personnel working in the Vocational Rehabilitation Centres
13. To recognize the national institutes and apex institutions on disability as manpower development centres
14. To register personnel working in national institutes and apex institutions on disability under the Ministry of Social Justice & Empowerment.

5.3.4 The National trust for the welfare of persons with autism, cerebral palsy, mental retardation and multiple disabilities act, 1999

The National Trust is a statutory body of the Ministry of Social Justice and Empowerment, Government of India, set up under the "National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities" Act (Act 44 of 1999).

Mission of the National Trust

The National Trust works towards providing opportunities for capacity development of Persons with Disability and their families, fulfilling their rights, facilitating and promoting the creation of an enabling environment and an inclusive society.

The National Trust's mission, or fundamental purpose, is to create an enabling environment, i.e. providing opportunities for Persons with Disabilities through comprehensive support systems which can also be done by collaborating with other Ministries, etc., which will lead towards development of an inclusive society.

Objectives

The objectives of the National Trust in particular are:-

- to enable and empower persons with disability to live as independently and as fully as possible within and as close to their community as possible.
- to facilitate the realisation of equal opportunities, protection of rights and full participation of persons with disability.
- to extend support to its registered organisations to provide need based services; and

- to evolve procedures for appointments of guardians and trustees for persons with disabilities.

5.3.5 The Rights of Persons with Disabilities Act, 2016

The Lok Sabha today passed "**The Rights of Persons with Disabilities Bill - 2016**". The Bill will replace the existing PwD Act, 1995, which was enacted 21 years back. The Rajya Sabha has already passed the Bill on 14.12.2016.

An Act to give effect to the United Nations Convention on the Rights of Persons with Disabilities and for matters connected therewith or incidental thereto.

Whereas the United Nations General Assembly adopted its Convention on the Rights of Persons with Disabilities on the 13th day of December, 2006;

AND WHEREAS the aforesaid Convention lays down the following principles for empowerment of persons with disabilities,—

(a) Respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons;

(b) Non-discrimination;

(c) Full and effective participation and inclusion in society;

(d) Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity.

(e) equality of opportunity;

(f) accessibility;

(g) equality between men and women;

(h) respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities;

AND WHEREAS India is a signatory to the said Convention;

AND WHEREAS India ratified the said Convention on the 1st day of October, 2007;

AND WHEREAS it is considered necessary to implement the Convention aforesaid.

The salient features of the Bill are:

i. Disability has been defined based on an evolving and dynamic concept.

ii. The types of disabilities have been increased from existing 7 to 21 and the Central Government will have the power to add more types of disabilities. The 21 disabilities are given below:-

1. **Blindness**
2. **Low-vision**
3. **Leprosy Cured persons**
4. **Hearing Impairment (deaf and hard of hearing)**
5. **Locomotor Disability**
6. **Dwarfism**
7. **Intellectual Disability**
8. **Mental Illness**
9. **Autism Spectrum Disorder**
10. **Cerebral Palsy**
11. **Muscular Dystrophy**
12. **Chronic Neurological conditions**
13. **Specific Learning Disabilities**
14. **Multiple Sclerosis**
15. **Speech and Language disability**
16. **Thalassemia**
17. **Hemophilia**
18. **Sickle Cell disease**
19. **Multiple Disabilities including deafblindness**
20. **Acid Attack victim**
21. **Parkinson's disease**

iii. Speech and Language Disability and Specific Learning Disability have been added for the first time. Acid Attack Victims have been included. Dwarfism, muscular dystrophy have has been indicated as separate class of specified disability. The New categories of disabilities also included three blood disorders, Thalassemia, Hemophilia and Sickle Cell disease.

iv. In addition, the Government has been authorized to notify any other category of specified disability.

v. Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others.

vi. Additional benefits such as reservation in higher education, government jobs, reservation in allocation of land, poverty alleviation schemes etc. have been provided for persons with benchmark disabilities and those with high support needs.

vii. Every child with benchmark disability between the age group of 6 and 18 years shall have the right to free education.

viii. Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education to the children with disabilities.

ix. For strengthening the Prime Minister's Accessible India Campaign, stress has been given to ensure accessibility in public buildings (both Government and private) in a prescribed time-frame.

x. Reservation in vacancies in government establishments has been increased from 3% to 4% for certain persons or class of persons with benchmark disability.

xi. The Bill provides for grant of guardianship by District Court under which there will be joint decision – making between the guardian and the persons with disabilities.

xii. Broad based Central & State Advisory Boards on Disability are to be set up to serve as apex policy making bodies at the Central and State level.

xiii. Office of Chief Commissioner of Persons with Disabilities has been strengthened who will now be assisted by 2 Commissioners and an Advisory Committee comprising of not more than 11 members drawn from experts in various disabilities.

xiv. Similarly, the office of State Commissioners of Disabilities has been strengthened who will be assisted by an Advisory Committee comprising of not more than 5 members drawn from experts in various disabilities.

xv. The Chief Commissioner for Persons with Disabilities and the State Commissioners will act as regulatory bodies and Grievance Redressal agencies and also monitor implementation of the Act.

xvi. District level committees will be constituted by the State Governments to address local concerns of PwDs. Details of their constitution and the functions of such committees would be prescribed by the State Governments in the rules.

xvii. Creation of National and State Fund will be created to provide financial support to the persons with disabilities. The existing National Fund for Persons with Disabilities and the Trust Fund for Empowerment of Persons with Disabilities will be subsumed with the National Fund.

xviii. The Bill provides for penalties for offences committed against persons with disabilities and also violation of the provisions of the new law.

xix. Special Courts will be designated in each district to handle cases concerning violation of rights of PwDs.

3. The New Act will bring our law in line with the United National Convention on the Rights of Persons with Disabilities (UNCRPD), to which India is a signatory. This will fulfill the obligations on the part of India in terms of UNCRD. Further, the new law will not only enhance the Rights and Entitlements of Divyangjan but also provide effective mechanism for ensuring their empowerment and true inclusion into the Society in a satisfactory manner.

5.3.6 National Policy for Persons with Disabilities, 2006

The National Policy recognizes that Persons with Disabilities are valuable human resources for the country and seeks to create an environment that provides them equal opportunities, protection of their rights and full participation in society. It is in consonance with the basic principles of equality, freedom, justice and dignity of all individuals that are enshrined in the Constitution of India and implicitly mandate an inclusive society for all, including persons with disabilities. The National Policy recognizes the fact that a majority of persons with disabilities can lead a better quality of life if they have equal opportunities and effective access to rehabilitation measures.

The salient features of the National Policy are:

i) Physical Rehabilitation, which includes early detection and intervention, counselling and medical interventions and provision of aids and appliances. It also includes the development of rehabilitation professionals;

ii) Educational Rehabilitation which includes vocational training; and

iii) Economic Rehabilitation, for a dignified life in society.

5.3.7 Disability and Constitution of India

The Constitution of India applies uniformly to every legal citizen of India, whether they are healthy or disabled in any way (physically or mentally)

Under the Constitution the disabled have been guaranteed the following fundamental rights:

1. The Constitution secures to the citizens including the disabled, a right of justice, liberty of thought, expression, belief, faith and worship, equality of status and of opportunity and for the promotion of fraternity.
2. Article 15(1) enjoins on the Government not to discriminate against any citizen of India (including disabled) on the ground of religion, race, caste, sex or place of birth.
3. Article 15 (2) States that no citizen (including the disabled) shall be subjected to any disability, liability, restriction or condition on any of the above grounds in the matter of their access to shops, public restaurants, hotels and places of public entertainment or in the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of government funds or dedicated to the use of the general public. Women and children and those belonging to any socially and educationally backward classes or the Scheduled Castes & Tribes can be given the benefit of special laws or special provisions made by the State.
4. There shall be equality of opportunity for all citizens (including the disabled) in matters relating to employment or appointment to any office under the State.
5. No person including the disabled irrespective of his belonging can be treated as an untouchable. It would be an offence punishable in accordance with law as provided by Article 17 of the Constitution.

6. Every person including the disabled has his life and liberty guaranteed under Article 21 of the Constitution.
7. There can be no traffic in human beings (including the disabled), and beggar and other forms of forced labour is prohibited and the same is made punishable in accordance with law (Article 23).
8. Article 24 prohibits employment of children (including the disabled) below the age of 14 years to work in any factory or mine or to be engaged in any other hazardous employment. Even a private contractor acting for the Government cannot engage children below 14 years of age in such employment.
9. Article 25 guarantees to every citizen (including the disabled) the right to freedom of religion. Every disabled person (like the non-disabled) has the freedom of conscience to practice and propagate his religion subject to proper order, morality and health.
10. No disabled person can be compelled to pay any taxes for the promotion and maintenance of any particular religion or religious group.
11. No Disabled person will be deprived of the right to the language, script or culture which he has or to which he belongs.
12. Every disabled person can move the Supreme Court of India to enforce his fundamental rights and the rights to move the Supreme Court is itself guaranteed by Article 32.
13. No disabled person owning property (like the non-disabled) can be deprived of his property except by authority of law though right to property is not a fundamental right. Any unauthorized deprivation of property can be challenged by suit and for relief by way of damages.
14. Every disabled person (like the non-disabled) on attainment of 18 years of age becomes eligible for inclusion of his name in the general electoral roll for the territorial constituency to which he belongs

5.3.8 International legal framework for disability

The Declaration of the Rights of the Disabled Persons (General Assembly Resolution 3447 of 9th Dec 1975 U.N High Commission for Human Rights states that:

"Disabled persons have the inherent right to respect for their human dignity. Disabled persons, whatever their origin, nature of seriousness of their disabilities has the same fundamental rights as their fellow citizens which imply first and foremost the right to enjoy a decent life as normal and full as possible."

But in reality, persons with disability are often excluded from mainstream society due to physical and social barriers.

Till date there is no international convention dealing exclusively with the rights of disabled persons. However there are a number of international instruments which form the basis of the international bill of rights which affords extends to and affords protection to violation of the rights of the disabled.

International treaties that are binding

The core United Nations Human Rights Conventions that are binding on States that have ratifiedthemare:

- International Covenant on Civil and Political Rights
- International Covenant on Economic, Social and Cultural Rights
- Convention on the Elimination of All Forms of Racial Discrimination
- Convention on the Elimination of all Forms of Discrimination against Women
- Convention against Torture and other Cruel, Inhuman and Degrading Treatment or Punishment
- Convention on the Rights of the Child
- International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families

There are also some international and regional human rights conventions that protect the rights of persons with disabilities specifically, or have provisions concerning persons with disabilities. These include:

- ILO Convention concerning Vocational Rehabilitation and Employment (Disabled Persons)
- Inter-American Convention on the Elimination of All Forms of Discrimination Against Persons with Disabilities

- Convention on the Rights of the Child (article 23)
- African Charter of Human and People's Rights (article 18 (4))
- The African Charter on the Rights and Welfare of the Child (article 13)
- European Social Charter (article 15)
- Protocol of San Salvador (Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights) (article 6 & 9)

While only the convention on the rights of the child specifically includes reference to the rights of the children with disabilities, there should be no doubt that all these conventions apply to people with disabilities as other members of the community. Any doubt about the application of these conventions to people with disabilities has been put to rest by the World Conference on Human Rights. Para 63 of the Geneva Declaration & Programme of Action states that:

"The World Conference on Human Rights affirms that all human rights & fundamental freedoms are universal and thus unreservedly include persons with disabilities. Every person is born equal and has the same right to life and welfare, education & work, living independently and active participation in all aspects of society. Any direct discrimination or other negative discriminatory treatment of a disabled person is a violation of his or her rights. The World Conference on Human Rights calls upon Governments, where necessary to adopt or adjust legislation to assure access to these & other rights for disabled persons".

Besides international conventions, there are a number of declarations, guidelines and Acts emanating from the UN, which deal specifically with a range of issues relating to disability.

International human rights treaties are binding on State parties that have ratified the instruments. Some universal instruments, such as the Universal Declaration of Human Rights, and some specific provisions, such as the principle of non-discrimination, have become part of customary international law and are considered binding on all States, even those that have not ratified a human rights treaty that embodies norms of customary law.

International instruments that are non-binding

International instruments, such as declarations, resolutions, principles, guidelines and rules, are not technically legally binding. They express generally accepted principles

and represent a moral and political commitment by States. They also can be used as guidelines for States in enacting legislation and formulating policies concerning persons with disabilities.

General policy instruments, such as the outcome documents of world summits and conferences, are applicable to persons with disabilities. These instruments include, for example, the Copenhagen Declaration and Programme of Action adopted at the World Summit for Social Development (6-12 March 1995), and the Millennium Declaration and the Millennium Development Goals adopted at the United Nations Millennium Summit in September 2000.

Several disability-specific non-binding international instruments have been adopted at the international level. The instruments include:

- Declaration of the Rights of Mentally Retarded Persons
- Declaration on the Rights of Disabled Persons
- World Programme of Action concerning Disabled Persons
- Tallinn Guidelines for Action on Human Resources Development in the Field of Disability
- Principles for the Protection of Persons with Mental illness and the Improvement of Mental Health Care
- Standard rules on the Equalization of Opportunities for Persons with Disabilities
- ILO Recommendation concerning Vocational Rehabilitation of the Disabled
- ILO Recommendation concerning Vocational Rehabilitation and Employment (Disabled persons)
- Sundberg Declaration on Actions and Strategies for Education, Prevention and Integration adopted by the UNESCO World Conference on Actions and Strategies for Education, Prevention and Integration Malaga (Spain), 2-7 November, 1981
- Salamanca Statement and Framework for Action on Special Needs Education adopted by the UNESCO World Conference on Special Needs Education: Access and Quality

Application of International Law

States that are parties to an international convention are legally bound to implement the provisions contained in the convention within their country. International law leaves

it to the countries to adopt legislative and other measures that are consistent with their constitutional processes to give effect to the convention and to ensure that any person whose rights are violated have access to effective remedies before independent courts. There are three main methods available to implement international legal instruments in domestic law:

1. Direct incorporation of rights recognised in the international instrument into what may be termed a "bill of rights" or fundamental rights of citizens in a country
2. Enactment of different legislative measures in the civil, criminal and administrative laws to give effect to the rights recognised in international legal instruments
3. Self-executing operation of international legal instruments in the national legal order

In relation to economic, social and cultural rights, implementation will differ from one country to another, depending on their level of development. Yet, all countries require major programme efforts. The obligation of States Parties in the international human rights instruments to promote progressive realisation of the relevant rights to the maximum of their available resources clearly requires Governments to do much more than merely abstain from taking measures which might have a negative impact on persons with disability.

Role of domestic courts

Direct application of international law by domestic courts also can play an important role in implementing international human rights norms applicable to persons with disabilities by means of compliance with relevant international standards and citing precedents in other jurisdictions.

Furthermore, judicial interventions can force the executive and the legislature to act with regard to drafting, enforcing and evaluating disability legislation. Judicial interventions in Public interest litigation in India have been particularly useful in this regard.

Dissemination of information is also an important tool. The greater the extent to which international norms on disability are widely known, the greater the possibility of domestic courts complying with these norms. This allows courts to play a major role in interpreting and developing international norms and standards, by applying international standards in domestic issues of disability.

5.4 Advocacy

Many adults with intellectual disabilities, particularly those who were not trained as young children to make choices, continue to find that they need help making decisions for themselves and assuming control of their own lives. In fact, although they might need it most ,this group of people has been among the last to have self determination become a target of instruction. **Self determination** refers to the attitudes and abilities required to act on one's own behalf, make decision for oneself, and make choices. Although the normalization movement is well over two decades old, people with intellectual disabilities typicallydo not have experience or opportunity to make their own decisionsor be independent. They often donot even get get the chance to make simple decidions like what movie to see, what restaurant to eat at,whether to go church,or whom to visit-even when the person making the decision was hired to assist the person with intellectual disabilities accomplish his or her needs.

Many adults with intellectual disabilities have found that they can achieve more independence and control of their lives if they receive support through the self advocacy movement which is comprised of self help groups .The major goal of self advocacy groups, which are located in almost every state ,is to help individualsintellectual disability achive equality,independence,and recognition as full citizens in society.These groups help one another solve individual problems,create leisure time activities,and develop friendshipsand supportive networks. These group educate people with disabilities about their rights and help them address issues of personal concern. They are clearly one important support needed by many people with intellectual disability and help them gain greater access to society.Advocacy has been defined as the representation of the rights and interests tof oneself or others in an effort to bring about change which will eliminate barriers to meeting identified needs.During the past two decades,advocacy has become a popular and potent consumer movement.

Advocacy means speaking or acting on behalf of oneself or others, or on behalf of particular issue. An advocate is someone who provides advocacy support when you need it. An advocate might help you access information you need or go with you to meetings or interviews, in a supportive role. You may want your advocate to write letters on your behalf, or speak for you in situations where you don't feel able to speak for yourself.

Self advocacy is

- Knowing your basic rights
- Standing up for your rights
- Taking responsibility for your rights
- Asking for help because you want it or need it
- Getting all the information
- Deciding what you want to do
- Finding out what and who will support you
- Beginning to change the way things are

5.4.1 Concept of advocacy

Advocacy in all its forms seeks to ensure that people, particularly those who are most vulnerable in society, are able to:

- Have their voice heard on issues that are important to them.
- Defend and safeguard their rights.
- Have their views and wishes genuinely considered when decisions are being made about their lives.

Advocacy is a process of supporting and enabling people to:

- Express their views and concerns.
- Access information and services.
- Defend and promote their rights and responsibilities.
- Explore choices and options

Students with intellectual disabilities must be able to serve as their own advocates as adults. Self advocacy is essential to success. In a study of successful adults with intellectual disabilities, Reiff,Ginsberg and Gerber (1996)found that Successful adult had all undergone a process whereby they gained or regained a sense of control in their lives.These aduld had made a conscious decision to take charge of their lives. One of the primary needs for adolescents and adult with disabilities is self advocacy skill. Self

advocacy is “the ability to recognize and meet the needs specific to one’s disability without compromising the dignity of oneself or other.

5.4.2 Types of Advocacy

System Advocacy

Advocacy by: An independent collective of citizens

In order to: Represent the rights and interests of groups of people with similar needs

Pursue human service system quality and progressive change.

Legal Advocacy

Advocacy by: Attorneys at law

In order to: Represent individuals or groups of individuals in the litigation or legal negotiation process.

Self Advocacy

Advocacy by: Individuals whose rights are at risk of being violated or diminished.

In order to: Represent ones own rights and interests speak on ones own behalf.

Citizen Advocacy

Advocacy by: A mature, competent, volunteer citizen

In order to: Represent ,as if they were his own, the rights and interests of another citizen.

Disability advocacy include:

- Providing information to people with disability about the irhuman rights and identify inginstances of discrimination.
- Assisting people with disability to uphold their rights by speaking with and writing to people and organisations to raise awareness of problems and seek solutions.
- Helping people with disability negotiate complaints processesor legalaction to enforce their human rights.
- Writing submissions and lobbying government to make changesthat promote and protect the rights of people with disability.

- Campaigning for social change by speaking to the media to raise awareness and high light situations where people with disability are treatedun fairly.

Disability advocates of tenrequire avariety of skills, including:

- Ability to communicate with and support people with arange of disability.
- Understanding laws, legal instruments and jurisdictions.
- Understanding processes with in over sight and complaints and lingbodies.
- Applying a human rights approach to advocacy.
- Negotiation skills.
- Lobbying and running effective campaigns.

5.4.3 Importance of Self advocacy

1. It is important to learn self-advocacy skills because it helps you decide what you want and what is possible for you to expect.
2. When you have good self-advocacy skills you can have more control and make the life decisions that are best for you.
3. Self-advocacy helps to empower you, to speak-up for yourself and make decisions about your life.

5.4.4 Need for Advocacy

Throughouthistory, people with disability have been hidden away or subjected to abuse, ignorance and prejudice. The power of disability advocacy over the pastc entury has radically shifted thinking to recognise the rights of all people with disability to live in the community, with choices equal to others. Disability advocacy came from the disability rights movement. In the 1970s and 1980s, significant battles were fought for the rights of people with disability, including therighttohave access to arange of in-home, residential and other community support services necessary to support living an independent, unsegregated life. Disability activists joined forces, with groups has those working forcivil, women's and Indigenous rights, to demand equal treatment, equal access and equal opportunity for people with disability. They challenged stereo types, rallied for political and institutional change, and lobbied for self-determination –on the streets, in the courts, across them edia, with in services and in the halls of power. Today,

over 4 million Australians with disability still face many barriers and further significant change is needed to ensure they enjoy the same rights and freedoms as other people. Disability advocacy continues to promote equal opportunity for people with disability to participate in all areas of life including:

a. **Safety** –More than 70 percent of women with disability have been victims of violent sexual encounters at sometime in their lives, and as taggering 90 percent of women with an intellectual disability have been subjected to sexual abuse.

b. **Employment** – 53 percent of people with disability of working age are in the labour force, compared with 83 percent of people with out disability. People with disability have nearly twice the unemployment rate of those without disability.

c. **Education** – 36 percent of people with disability of working age have completed high school, compared with 60 percent of people with out disability.

d. **Health** – 35 percent of people with disability report having poor or fair health compared with 5 percent of people with out disability.

5.4.5. When is Self-Advocacy useful?

- When you want to be listened to
- When you are being assessed
- When you are making a complaint
- When you are developing or reviewing a care plan

5.4.6 Where can you Self-Advocate?

There are many places that you might want to speak-up for yourself or ask for what you want such as:

- At home
- At work
- At school
- At the hospital
- At the doctor

- At the shops
- On the bus

And many more places. If you are not happy with the way something is done then it is up to you to help change it.

Nobody else knows how you feel or what you think- YOU need to tell people if you are not happy or you want something to change.

5.4.7 Myth ofadvocacy

- Providing counselling.
- Makingdecisionsforanotherperson.
- Providing mediation.
- Providing casemanagement.

5.5 Current Gender Issues-Socio, cultural and economic

5.5.1 Concept of gender issues

When men leave their villages for better-paid jobs in cities or abroad, women get saddled with the farm work as well as their domestic chores. When bloated state enterprises "rationalise" their workforces, women get laid off before male "heads of household." When sweatshops seek underpaid casual labour, women are the first to be recruited.

When newly rich men dabble in vice, village girls get dragooned into prostitution and middle-aged matrons wind up divorced. Yet when fast-changing lifestyles provoke a traditionalist backlash, patriarchy reasserts itself with a vengeance. When inflation bids up dowries and social pressures depress birth rates, girl babies get aborted or murdered in their cribs to make way for male heirs. When the resulting skew in the sex ratio makes for a shortage of marriageable women, a black market arises for kidnapped brides. Processes of political and economic transformation that have changed the face of the world over the past decades have had a profound impact on the lives of women. Many of these changes have been positive. Some, however, have strengthened the bonds of subordination and discrimination against women, restricting them from enjoyment

of their economic and social rights.Internal conflicts and wars have led to displacement and destruction of property and livelihoods, which place women in an ever more vulnerable position. Military conflict also results in an increase in violence and crime, and women and girls become particular targets.Extremism and religious fundamentalism deny women's autonomy and subject them to the most cruel and inhuman of punishments for "transgression" of norms laid out by those in power within the hierarchies that rule these movements. The rapid globalization of the world's economies has brought in its wake not only structural adjustment programs that weaken national economies and nation-states, but also promotion of forms of industrialization and agriculture that are more exploitative of both human and natural resources. Statistics show that the female labor force is the most affected. In addition, as the poor of the world become poorer, women become the poorest of them all; the "feminization" of poverty is a reality in the contemporary world.A decrease in social spending—for example, on public health, education, transport, food and fertilizer subsidies—has been a critical part of the "structural adjustment programs" imposed on many countries by the international financial institutions.

The United Nations Development Programme's Human Development Report 1993 highlighted various areas in which women fare worse than men.

Literacy—Women are much less likely than men to be literate. In South Asia, female literacy rates are only around 50% those of males in Nepal 35%. Sudan 27%. Women make up two-thirds of the world's illiterates.

Higher education—Women in developing countries lag far behind men. In Sub-Saharan Africa, their enrolment rates for tertiary education are only a third of those of men.Even in industrial countries; women are very poorly represented in scientific and technical study . . .

Employment—In developing countries women have many fewer job opportunities, the employment participation rates of women are on average only 50% those of men (in South Asia 29% and in Arab States only 16%) . Wage discrimination is also a feature of industrial countries: in Japan, women receive only 51% of male wages.Women who are not in paid employment are, of course, far from idle.Indeed, they tend to work much longer hours than men.

Health—Women tend on average to live longer than men. But in some Asian and North African countries, the discrimination against women—through neglect of their health or nutrition—is such that they have a shorter life expectancy . . .

National statistics—Women are often invisible in statistics. If women's unpaid housework were counted as productive output in national income accounts, global output would increase by 20-30%.

5.5.2 Understanding Gender Ideology and Its Practice

The question of gender is normally ignored in the development of policies or programs for dealing with economic, social and cultural issues.The 1995 UNDP Human Development Report rightly stated, "For too long it was assumed that development was a process that lifts all boats . . . that it was gender neutral in its impact.Experience teaches otherwise. It is thus essential to understand gender ideology and ensure that women's perspective is not ignored or undermined. Differentiation based on gender (male-female) forms the core of gender ideology. Biological differences are real (e.g., chromosomes, external and internal genitalia, hormonal states and secondary sex characteristics) and lead to the determination of the male or female sex. Through gender ideology, however, these differences are extended to the social milieu and are taken for granted in establishing social position and hierarchy, providing access to resources and participation in society, and creating stereotyped roles for men and women. On the basis of sex differences, a superordinate-subordinate hierarchy is established, through which males have access to land holdings, inheritance, skills, productive employment and the associated high status. Women, on the other hand, receive poor nutrition and medical care, and inferior education; they suffer violence and are even denied life (female infanticide).

Social institutions such as the family, religious groups or caste systems; political and legal structures; economic and educational institutions; and the mass media—all are permeated with norms and values that discriminate against women and legitimize and institutionalize social placements on the basis of gender.

1. Right to Work and Rights at Work

From a gender perspective, the meaning of work would be changed to include unpaid work at home, on the family farm, and elsewhere, work that is currently not valued by society. A redefinition of work would recognize women's productive labor and enable women to profitably engage in home-based work.

Women are currently relegated to low-paid and low-skilled jobs; this needs to be rectified. A fresh perspective would help ensure that women have flexible working

hours and that they are reintegrated into the labor force after time off for marriage and childbirth without penalization for absence.

Rights at work would include protection from sexual harassment in the work place, trade unions and labor organizations.They would also include provision of nursing breaks for breast-feeding mothers, and establishment of crches and day-care centers; separate toilet facilities and free access to them; provision of dayrooms for rest and recognition of menstruation-related health problems as the basis of rest breaks; and ensuring participation of women in trade unions by holding meetings at times that are convenient to women. (See Module 10 for more on the right to work and rights at work.)

2. Land Rights and Right to Property

Women's claims to land bring into question their capacity to enjoy equal rights in every sphere—civil, political, economic, social and cultural. Women's rights to equal inheritance, to equal shares of matrimonial property, to recognition as legitimate and legal owners of land and property, who can buy, sell, lease and raise loans on the basis of that property, are denied all over the world, in a wide range of cultures and communities.

3.Right to Health

A gender perspective on health is not the same as focusing on women's health or, even more narrowly, on health conditions exclusively experienced by women as a consequence of their biology. The following passage provides a useful summary of key issues:

A gendered perspective on health includes, besides examining differences in health needs, looking at differences between women and men in risk factors and determinants, severity and duration, differences in perceptions of illness, in access to and utilization of health services, and in health outcomes.

The heaviest burden of ill-health is borne by those who are most deprived, not just economically, but also in terms of capabilities, such as literacy levels and access to information. Substantial evidence exists to indicate that in almost all societies, women and men have differing roles and responsibilities within the family and in society, different social realities, and unequal access and control over resources. It therefore follows that gender is an important social determinant of health. Gender differences are observed in every stratum of society, and within every social group, across different castes, races, ethnic or religious groups.

Men and women perform different tasks and occupy different social and often, different physical spaces. The sexual division of labour within the household, and labour market segregation by sex into predominantly male and female jobs, expose men and women to varying health risks. For example, their responsibility for cooking exposes poor women and girls to smoke from cooking fuels. Studies show that a pollutant released indoors is 1000 times more likely to reach people's lungs than a pollutant released outdoors, since it is released at close proximity. Thus, the division of labour by sex, a social construct, makes females more vulnerable to chronic respiratory disorders including chronic obstructive pulmonary disease, with fatal consequences. Men would in turn be more exposed to risks related to activities and tasks that are, by convention, male, such as mining.

Differences in the way society values males and females, and accepted norms of male and female behaviour, influence the risk of developing specific health problems as well as health outcomes.Studies have indicated that son preference and the under-valuation of daughters skew the investment in feeding and in health care made for boys and girls. This has potentially serious negative health consequences for girls, including avoidable mortality. On the other hand, social expectations about male behaviour may expose boys to a greater risk of accidents, and to the adverse health consequences of smoking and alcohol-use.

Finally, because women and men do not have equal access to and control over resources such as money, transport and time, and because their decision-making power within the family is unequal, with men enjoying privileges that women are denied, women's access to health services is restricted.

There are other factors which compound women's vulnerability because of the way society expects women and men to behave.For the majority of women, high risk activity can simply mean being married. Social norms which accept extra-marital and pre-marital sexual relationships in men as "normal"; and women's inability to negotiate safe sex practices with their partners are factors that make it difficult for women to protect themselves from sexually transmitted infections.

To summarise, both "sex" and "gender" differences between women and men, and the many ways in which the two are intertwined, contribute to differences in health risks, health seeking behaviour, access to and utilisation of health services, and health outcomes between the two groups. Research, policy and services aiming to improve the

health status of a population will have to examine, understand and address these differences.

5.6 Advances in technology

Modern technology can make a tremendous difference in the lives of individuals with intellectual disabilities, and the range of technology that has made a difference is wide. Technology can be as simple as letting students with intellectual disability use a calculator to perform arithmetic tasks, allowing them to compensate successfully for the difficulties they often face when having to solve mathematical problems used in important life skills like balancing a checkbook. Technology benefiting this group of individuals can also be complex. For example medical technology has provided interventions and techniques that lessen the impact of some causes and has prevented others. For example the development of shunt technology has prevented thousands of cases of intellectual disability that were inevitable with the onset of hydrocephaly. Recent advances in fetal tissue transplantation, fetal gene implant therapy, fetal corrective surgery, and fetal therapy are effective today and hold great promise for the future. But when we think of technology, we usually do not think of medical technology .We think of computes, and the applications of computer technology to individuals with disabilities and to classroom settings are far reaching as well.

The ready availability of computer technology has opened up communication possibities for many students with intellectual disabilities who are unable to communicate with others through speech .The ability to communicate is essential to life satisfaction. It can make the difference between a sad, depressed, isolated child and a child who is an enthusiastic participant in the world. Computer technology allows many individual with severe disabilities to communicate. Computer can be used as communication boards and to synthesize speech, to write ,and to communicate with others who have computers. Computer technology has also empowered individuals with disabilities by putting their environment within their control. Modern computers can drive gadgets and toys and can perform complex functions that will make life better for all persons with disabilities. Touching a key board is no longer required. eye contact with the machine can cause the production of text or speech .Researchers are even developing ways to control a computer by merely thinking commands.

When people think of technology and school, they usually think of computer assisted or enhanced instruction. As time goes on, availability and use of computers in all classrooms will increase. Teachers will need to possess considerable skills about when to use computers to assist instruction,to teach new skills,to serve as an information resource,and for drill and practice.and more importantly,they willneed to become sophisticated in how to evaluate software for classroom use.

Computer assissted instruction can be groupd by different functions: drill and practice,tutorial instruction,games,simulations and programming.Drill and practice allows students to master and become proficient at tasks.Althrough littledifferent traditional workbooks,they allow students to proghress at their own pace,giving fewer items if they are not neered and more if mastery is not achieved in typical time. Tutorial instruction allows for students to skip items they have masters on their own or received more practice and instruction on segments of skills where instruction is still required. Games offer interesting formats for drill and practice. They often provide fast-paced activities, immediate feedback and built in evaluation. many students find them fun and highly motivating ,certenly more so than the traditionally sets of dittoed worksheets. Simulation technology is developing ,so students will be to learn skills in close to real life contexts.

By using interactive video technology, skills like banking ,safety,shoppingand navigating communities can be taught in classroom setting . Finnaly teachers are mow able to program for individual students need,and students with disabilities can create their own graphics and computer programmes.Tere is no question that the future holds exciting new applications for technology in classroom settings.Teachers' challenge will be to remain current about what is available and clever in making decisions about what hardware and which software will benefit their students.

5.6.1Assistive Technology (AT) can be a device or a service. An assistive technology device is any item, piece of equipment, or product system, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. An assistive technology service means any service that helps an individual with a disability select, acquire, or use an assistive technology device (Assistive Technology Act of 2004).

5.6.2 Electronic and Information Technology (E&IT) includes computers and related resources and communication products such as telephones, transaction machines such as ATMs for banking, World Wide Web sites, and office copiers and faxes (Wehmeyer et al, 2004).

5.6.3 Benefits of technology for persons with disabilities

Kelker (1997) developed the following list indicating that assistive technology may be considered appropriate when it does any or all of the following things:

- Enables an individual to perform functions that can be achieved by no other means.
- Enables an individual to approximate normal fluency, rate, or standards—a level of accomplishment that could not be achieved by any other means.
- Provides access for participation in programs or activities which otherwise would be closed to the individual.
- Increases endurance or ability to persevere and complete tasks that otherwise are too laborious to be attempted on a routine basis.
- Enables an individual to concentrate on learning or employment tasks, rather than mechanical tasks.
- Provides greater access to information.
- Supports normal social interactions with peers and adults.

5.6.4 Useof technology for persons with disabilities

a. Communication. For individuals who cannot communicate with their voices technology can help them communicate. Augmentative and alternative communication (ACC) may involve technology ranging from low-tech message boards to computerized voice output communication aids and synthesized speech.

b. Mobility. Simple to sophisticated computer controlled wheelchairs and mobility aids are available. Technology may be used to aid direction-finding, guiding users to destinations. Computer cueing systems and robots have also been used to guide users with intellectual disabilities.

c. Environmental control. Assistive technology can help people with severe or multiple disabilities to control electrical appliances, audio/video equipment such as home entertainment systems or to do something as basic as lock and unlock doors.

d. Activities of daily living. Technology is assisting people with disabilities to successfully complete everyday tasks of self-care. Examples include:

2. Automated and computerized dining devices allow an individual who needs assistance at mealtime to eat more independently.
3. Audio prompting devices may be used to assist a person with memory difficulties to complete a task or to follow a certain sequence of steps from start to finish in such activities as making a bed or taking medication.
4. Video-based instructional materials can help people learn functional life skills such as grocery shopping, writing a check, paying the bills or using the ATM machine.

a. Education. Technology is used in education to aid communication, support activities of daily living and to enhance learning. Computer-assisted instruction can help in many areas, including word recognition, math, spelling and even social skills. Computers have also been found to promote interaction with non-disabled peers.

b. Employment. Technology, such as video-ass skill development and to teach complex skills for appropriate job behavior and social interaction. Prompting systems using audio cassette recorders and computer-based prompting devices have been used to help workers stay on task. Computerized prompting systems can help people manage their time in scheduling job activities.

c. Sports and recreation. Toys can be adapted with switches and other technologies to facilitate play for children. Computer or video games provide age-appropriate social opportunities and help children learn cognitive and eye-hand coordination skills. Specially designed Internet-access software can help people with intellectual disabilities access the World Wide Web. Exercise and physical fitness can be supported by video-based technology.

5.6.5 Barriers of technology for people with intellectual disabilities

A survey by The Arc (Wheeler, 1998) found that lack of information about the availability of the device and the cost of devices were the main barriers. Other barriers included the unavailability of assessment information, limited training on device use and device complexity.

Even though it is the goal of most technology development efforts to incorporate the principles of universal design, cognitive access is not carefully considered. Universal

design ensures that the technology may be used by all people without the need for adaptation or specialized design. An example of cognitive access would be if someone with disabilities is using a computer program, onscreen messages should last long enough or provide wait time to consider whether to press a computer key. Or the time should be sufficient between dialling and pressing the numerals to complete a phone call using a rechargeable phone card as payment. Because individuals with intellectual disabilities have a range of learning and processing abilities, it is difficult to develop assistive technology solutions that are appropriate for all.

5.6.6 Use of technology in school

The Individuals with Disabilities Education Act (IDEA) requires that the need for AT be considered for all students when developing the individualized education program. The intention of the special education law is that, if a student with disabilities needs technology in order to be able to learn, the school district will (a) evaluate the student's technology needs; (b) acquire the necessary technology; (c) coordinate technology use with other therapies and interventions; and (d) provide training for the individual, the individual's family, and the school staff in the effective use of the technology. If the student's individualized education program specifies AT is needed for home use to ensure appropriate education, the school must provide it. If the school purchases an AT device for use by the student, the school owns it. The student cannot take it when moving to another school or when leaving school.

5.7 Implications of the above for Inclusion

5.7.1 Legislation and inclusion

Inclusive education (IE) is a new approach towards educating the children with disabilities with that of normal ones within the same roof. It seeks to address the learning needs of all children with a specific focus on those who are vulnerable to marginalization and exclusion. It implies all learners with or without disabilities being able to learn together through access to common pre-school provisions, schools and community educational setting with an appropriate network of support services. Inclusive Education is a process of increasing the participation of all students in school, including those with disabilities (Ainscow, 2000). This is possible only in flexible education system that assimilates the needs of diverse range of learners and adapts itself to meet these

needs. Inclusion is not an experiment to be tested but a value to be followed. All the children whether they are disabled or not have the right to education as they are the future citizens of the country. The principle of inclusive education was adopted at the "World Conference on Special Needs Education: Access and Quality" (Salamanca, Spain 1994) and was restated at the World Education Forum (Dakar, Senegal 2000). The idea of inclusion is further supported by the United Nation's Standard Rules on Equalization of Opportunities for Person with Disability Proclaiming Participation and equality for all. On December 13, 2006, The Convention on the Rights of Persons with Disabilities (UNCRPD) and its Optional Protocol was adopted at the UN headquarters in New York. This particular convention had the highest number of signatories in history to a UN Convention on its opening day. Of late, a consensus has emerged among Indian intellectuals and pedagogues for adopting inclusive education in mainstream schools

The Integrated Education of Disabled Children (IEDC) 1974 The Ministry of Welfare created the Integrated Education of Disabled Children Scheme (IEDC) in 1974. The scheme provided children with disabilities "financial support for books, school uniforms, transportation, special equipment and aids," with the intention of using these aids to include children in mainstream classrooms. However, the government of India realized that providing structural changes to the classroom, such as adapted equipment, would not be enough to integrate children with disabilities into the classroom. Although it was encouraged and partly funded by UNICEF, fifty percent of the funding was supposed to go through the state governments. The responsibility was transferred to the Department of Education in 1992. Despite the fact that this scheme was supposed to be nation-wide, it was implemented in only 10 out of 29 of the states in India. Sharma (2001) found three major problems with the IEDC. There was a lack of training and experience of the teachers, a lack of orientation among regular school staff about the problems of disabled children and their educational needs, and the lack of availability of equipment and educational materials. The National Policy on Education, 1986 (NPE, 1986), and the Programme of Action (1992) stresses the need for integrating children with special needs with other groups. The objective to be achieved as stated in the NPE (1986) is "to integrate the physically and mentally handicapped with general community as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence." Although this policy was created in 1986, it was not implemented until the Plan of Action was created in 1992. The 1992 Program of Action (POA), created to implement the 1986 NPE, broadens the 1986 definition of who should be

included in mainstream schooling, that "a child with a disability who can be educated in the general school should not be in the special school."

Inclusive education in Sarva Shiksha Abhiyan Sarva Shiksha Abhiyan (SSA) was launched to achieve the goal of Universalisation of Elementary Education. This adopts a zero rejection policy and uses an approach of converging various schemes and programmes. The key objective of SSA is Universalisation of Elementary Education (UEE). Three important aspect of UEE are access, enrolment and retention of all children in 6-14 years of age. A zero rejection policy has been adopted under SSA, which ensures that every Child with Special Needs (CWSN), irrespective of the kind, category and degree of disability, is provided meaningful and quality education. It covers the following components under education for children with special needs:-Early detection and identification, functional and formal assessment, Educational Placement, Aids and appliances, Support services, Teacher training, Resource support, Individual Educational Plan (IEP), Parental training and community mobilization, Planning and management, Strengthening of special schools, Removal of Architectural barriers, Research, Monitoring and evaluation, Girls with disabilities. The most recent initiative of Government of India to achieve the goal of universalisation of secondary education (USE) is Rashtriya Madhyamik Shiksha Abhiyan (RMSA), aimed at expanding and improving the standards of secondary education i.e. from class VIII to X. RMSA will work in line with revised scheme of Inclusive Education for the Disabled at Secondary Stage (IEDSS) which ensures that every child with disability will be identified at secondary level and his/her Ieducational needs will also be assessed and supplied learning material, aids and appliances, assistive devices, support services, as per his/her requirement. The right to education bill The Government of India decided to make Amendment 21(A) of the constitution, giving children between the ages of 6-14 the right to a free, appropriate and compulsory education, into an act. In 2005, the Right to Education Act was drafted by the Ministry of Human Resource Development. However, for three years, the bill was not discussed by the cabinet, was not brought up in budget sessions, and was passed around and generally avoided by different departments. The Right to Education Act was passed in 2009 and put into full effect in 2010. The Supreme Court upheld the constitutional validity of the act on April 12, 2012. The action plan for inclusion in education of children and youth with disabilities It was extremely important that India create a bill around section 45 and 21 (A) of the constitution, which became the Right to Education Act which was originally floated in 2005. However, in the same

year, the Ministry of Human Resource Development also drafted the Action Plan for Inclusion in Education of Children and Youth with Disabilities (IECYD). This action plan envisions that all children with a disability will have access to mainstream education. In order to facilitate this, the government, specifically collaborating between the Rehabilitation Council and the National Council for Teacher's Education, will ensure that there are adequate numbers of teachers trained in inclusive education, as well as the proper physical and ideological infrastructure to facilitate inclusion in schools. The plan specifically looks to move from integration towards inclusion, stating, whereas under the Scheme of Integrated Education for the Disabled Children (IEDC) as it stands at present, children with disabilities are placed in a regular school without making any changes in the school to accommodate and support diverse needs, the revised IECYD will, in contrast, modify the existing physical infrastructures and teaching methodologies to meet the needs of all children, including Children with Special Needs. A unique aspect of this plan is that it steps outside the Indian constitution and includes students with disabilities outside of the 6-14 age range. Through Integrated Child Development Services (ICDS), anganwadi workers will be trained to identify children with disabilities at an early age, so they can receive early intervention services. While the crucial importance of early intervention cannot be overlooked, the IECYD also discusses accommodations for students with a disability in universities, including a mandatory "Disability coordinator" who provides inclusion services for students with disabilities.

Reforming past scheme: Inclusive education of the disabled at the secondary stage In 2008, the government reformed the Scheme of Integrated Education for Disabled Children (IEDC) and created the Inclusive Education of the Disabled at the Secondary Stage (IEDSS). It went into effect on April 1st, 2009. IEDC was reformed to take into account the resources provided forstudents with disabilities ages 6-14 under Sarva Shiksha Abhiyan. The objective of IEDSS is to enable the disabled children who have completed eight years of elementary education to continue their education at the secondary stage in an inclusive environment in regular schools. IEDSS provides students with disabilities ages 14-18, studying in public or governmentfunded schools, Rs. 3000/ - per school year from the central government to purchase the necessary materials to use to ensure inclusion of the student in the mainstream school system. This is the first policy that specifically acknowledges the importance of secondary education for persons with disabilities.

The national policy for people with disabilities The most recent policy specifically concerning education and people with disabilities is the Ministry of Social Justice and Empowerment's National Policy for People with Disabilities. Although this policy was created in 2006, after the 2005 Action Plan, and the two policies were created under separate ministries, they are very similar in both the ideologies that they were founded on, as well as the actual changes they are trying to make to the system. This policy echoes the 2005 plan of action and 2005 (made official in 2009) bill by changing special schools in resource centers for students with disabilities and teachers. In addition, the policy seeks to bridge the gap between rural and urban areas by creating more District Disability and Rehabilitation Centers (DDRCs), which disseminate information in terms of availability of aids and appliances, ensure the mandated 3% coverage of persons with disabilities in poverty reduction programs and target girls with disabilities. The Rights of Persons with Disabilities Act (2016) is the disability legislation passed by the Indian Parliament to give effect to the United Nations Convention on the Rights of Persons with Disabilities, which India ratified in 2007. The Act replaces the existing Persons with Disabilities (Equal Opportunity Protection of Rights and Full Participation) Act, 1995. The number of disabilities recognized under the act has been increased from 7 (recognized under the Old Act) to 21, and have been elaborately defined. The law recognizes for the first time three blood disorders namely thalassemia, hemophilia, and sickle cell disease, intellectual disability, disability caused due to neurological conditions, acid attack etc. as disabilities. Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others. The Act focuses on multiple aspects such as education, skill development, employment, recreation, rehabilitation, health and social security of person with disability. The act provides every child with benchmark disability between the age group of 6 and 18 years right to free education. Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education to the children with disabilities. For persons with benchmark disabilities a reservation of not less than 5% in higher education, not less than 5% in government jobs and not less than 4 %, has been provided in allotment of agriculture and housing land, in poverty alleviation schemes and in doing sopriority has to be given to women. The law has become more gender sensitive as separate provisions have been made for women suffering from disability. Private establishments have also been covered within the ambit of the new Act. Governments as well as private service providers are

required to provide services in accordance with the rules on accessibility formulated by the Central Government. No building plan is to be approved unless it complies with the rules of accessibility. Special powers have been conferred on the Executive Magistrate and Police Officer to deal with complaints of abuse, violence or exploitation against the person with disabilities. The Act also requires the State Governments in concurrence with the Chief Justice of High Court to notify District Court/Court of Session to be special courts for speedy trial of offences under the Act. The Act provides for setting up of National Fund for persons with disabilities. Thus, this new act will not only enhance the rights and entitlements of persons with disabilities but also provide effective mechanism for ensuring their empowerment and true inclusion into the society in a satisfactory manner.

5.7.2 Technology and inclusion

Assistive technology has the capacity for increasing student independence, increasing participation in classroom activities and simultaneously advancing academic standing for students with special needs, providing them the ability to have equal access to their school environment. Assistive technology is often discussed by technology levels as being high-, middle-, or low-tech. A low-tech assistive technology option is usually easy to use, has low cost (under $200 US), and typically does not require a power source. Mid-tech assistive devices are also easy to operate but typically require a power source. The high-tech device is usually complex and programmable, and usually includes items that require computers, electronics or microchips to perform a function. An example of the application of technology could range from having a voice input word processor (high tech) to a student using an adapted pencil grip (low tech) to assist during writing (ATEN, 2002). Another view of assistive technology focuses on the levels in applying the assistive technology personally, developmentally, or instructionally necessary (Judd-Wall 1999). Of these three the most important to the general teacher is instructionally necessary level. The personally necessary level is concerned with assistive technology devices that are for the use of an individual student, and the suggestion and evaluation of such devices are left to experts. Developmentally necessary assistive devices can be shared among individuals. These devices help meet an educational need based on a developmental delay, which ideally would be improved, thereby eliminating the need for the item in an individuals future. The instructionally necessary devices are the devices that assist in the instructional process at a course or grade level, and this level has

important implications for the standard classroom teacher. The a modification or technology applications would not need to accompany the student as he or she progresses to the next course or academic level, and instead the assistive technology device could remain at the course or grade levels teacher.

An analysis was completed of the categories of assistive technology concerning uses or applications as identified by organizations such as Rehabilitation Engineering and Assistive Technology Society of North America (RESNA, 2000),Center for Applied Special Technology (CAST), Assistive Technology Education Network (ATEN), and others. The resulting compiled list contained fourteen different major application areas for assistive technology. While all fourteen areas could apply in some way to the educational setting only six directly apply to common educational activities, and as such teachers will need knowledge of the assistive technology options as they relate to his/her own teaching of students with special needs. These six areas are concerned with the common student activities which students do on a regular basis, and include learning and studying, reading, writing, mathematics, and computer access. (See end of paper for example assistive technologies for each educational category.) Assistive Educational Technology (AET) is the theory and practice of design, development, utilization, management, and evaluation of processes and resources that are used to increase, maintain, or improve functional capabilities of individuals, with or without disabilities, for learning (Cavanaugh, 2000).The distinction between assistive technologies and general educational technologies is becoming less clear as the concept of universal design is incorporated into more and more conventional technologies. Most of the assistive technologies within the six areas as identified for common classroom applications are excellent examples of assistive educational technologies, which also indicates their importance in universal design.

5.7.3. Advocacy for inclusion

Advocacy is a difficult process to define; there are no internationally agreed upon definitions of advocacy so therefore defining advocacy is often a process in itself.

In the context of international development, organisations often give their own definitions of advocacy which range from broad to specific definitions. However, general advocacy activities in the context of development typically relate to a process where individuals, groups or communities try to influence policy and decision-makers. These

groups aim to change policy, procedures and/or practice by focusing upon and minimising the structural causes of poverty and disadvantage. Advocacy is a means to achieving equity and social justice through the empowerment of disadvantaged groups, including people with disabilities, so they actively participate and are directly included in decision making processes affecting their lives. Advocacy activities typically cover a broad range of activities such as awareness-raising, lobbying, public relations and influencing specific legislation.

Advocacy is key to challenge barriers to inclusion and improve policy, environmental and attitudinal factors so people with disabilities are fully supported, enabled, included and empowered to participate fully on an equal basis in society. This is supported by the United Nations Convention on Rights of Persons with Disabilities (CRPD), with a particular focus on article 8.

5.7.4 Gender issues and inclusion

Attention to gender is particularly significant in view of the feminization of migration. Gender equality and empowerment of women as well as the active participation of women in political, economic, social and cultural life should be promoted. For women to be able to fully exercise their human rights, gender perspectives have to be mainstreamed in all inclusive urban policies. It is widely recognized that the causes and consequences of international migration differ for men and women depending on gender relations and gender stratification in both the mother and host societies. Norms and values in most societies are still far from being gender neutral and the status of women in general is not yet equal to that of men. International migration often brings to the fore the different ways in which gender differentially determines outcomes for men and women.

5.8 Let us sum up

Initiatives undertaken by the Government of India cover a wide range of policies, plans, programmes, schemes and legal enactments related to persons with disabilities in the country. Although the Government of India has attempted to create numerous policies that are inclusive for people with disabilities since the country's independence in 1947, their implementation efforts have not resulted in an inclusive system of education, nor have they reached their goal of "Education for all" across the country.

Still, at present, the policies governing the education system are inclusive but, the problem is with implementation. The Government of India needs to bridge the gaps in their education system to build a strong system of inclusive education in India.*Technology and Disability* communicates knowledge about the field of assistive technology devices and services, within the context of the lives of end users – persons with disabilities and their family members.Voices for Independence speak out for the equality and civil rights of people with disabilities. Voices work to teach people with disabilities how to become their own voice using either individual or group advocacy techniques. Consumer may be afraid or may not understand how to stand up for their civil rights. Before advocacy efforts, something as simple as crossing the street or having access to public places was not possible. Without basic freedoms in place, it's very hard to implement other core services.

5.9 Unit end exercises

1. How does discussion on social inclusion lead one to diversity among people?
2. What do you mean by advocacy? What are the types of advocacy?
3. Describe in details about technology advancement.
4. Discuss implications of technology in inclusion.
5. Narrate briefly about Indian legislation and policies.
6. Discuss about the social cultural gender issues in india.

5.10 References

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মানুষের জ্ঞান ও ভাবকে বইয়ের মধ্যে সঞ্চিত করিবার যে একটা প্রচুর সুবিধা আছে, সে কথা কেহই অস্বীকার করিতে পারে না। কিন্তু সেই সুবিধার দ্বারা মনের স্বাভাবিক শক্তিকে একেবারে আচ্ছন্ন করিয়া ফেলিলে বুদ্ধিকে বাবু করিয়া তোলা হয়।

— রবীন্দ্রনাথ ঠাকুর

ভারতের একটা mission আছে, একটা গৌরবময় ভবিষ্যৎ আছে, সেই ভবিষ্যৎ ভারতের উত্তরাধিকারী আমরাই। নূতন ভারতের মুক্তির ইতিহাস আমরাই রচনা করছি এবং করব। এই বিশ্বাস আছে বলেই আমরা সব দুঃখ কষ্ট সহ্য করতে পারি, অন্ধকারময় বর্তমানকে অগ্রাহ্য করতে পারি, বাস্তবের নিষ্ঠুর সত্যগুলি আদর্শের কঠিন আঘাতে ধূলিসাৎ করতে পারি।

— সুভাষচন্দ্র বসু

Any system of education which ignores Indian conditions, requirements, history and sociology is too unscientific to commend itself to any rational support.

— Subhas Chandra Bose

Published by : Netaji Subhas Open University, DD-26, Sector-I, Salt Lake, Kolkata-700 064 &
Printed at : The Saraswati Printing Works, 2, Guru Prosad Chowdhury Lane, Kolkata 700 006