Teaching Material of B. Ed. in Special Needs Education

Identification and Intervention for the Children with Special Needs

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Identification and Intervention for the Children with Special Needs

(Course No: Ed…..)

Bachelor Degree in Special Education

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Unit I: Introduction to Developmental Deviation

1.1 General Introduction to Developmental Deviations of Children with Special Needs

The meaning of 'deviation' is deviate away (bending from original path) from some reference point. In developmental deviation, the developmental process does not follow the developmental patterns which are considered 'normal'. From conception to birth and birth to the later childhood, most children normally pass through the several developmental stages. These children follow the same sequence of growth and development. These stages of normal development and growth are considered as reference to study the deviation in development of a particular child. Deviation in development refers to the development of such children whose development does not go normally and develops a differently abled child.

1.1.1 Developmental delays

There is lots of variation around what age a child should learn specific developmental skills, such as walking or talking. Most children develop these skills during the normal time period without any issues. However, some children don't attain these skills at the appropriate age. For example, some children learn how to walk well after their second birthday. When this happens, it may be a sign of developmental delay. The term developmental delay refers to when a child does not achieve developmental milestones within the normal age range. Simply put, it is a delay in a child's development.

Having a developmental delay is not the same thing as having a developmental disability, though it is possible for a developmental delay to develop into a developmental disability if left untreated. Furthermore, developmental disability is a long-term issue, while a developmental delay may improve with intervention and can disappear altogether once the child catches-up in his or her development. A developmental delay can occur in just one area or in a few. A *global developmental delay* is when kids have delays in at least two areas.

Kids develop skills in five main areas of development:

1. **Cognitive (or thinking) skills:** This is the ability to think, learn and solve problems. In babies, this looks like curiosity. It's how your child explores the world around him with his eyes, ears and hands. In toddlers, it also includes things like learning to count, naming colors and learning new words.

2. **Social and emotional skills:** This is the ability to relate to other people. That includes being able to express and control emotions. In babies, it means smiling at others and making sounds to communicate. In toddlers and preschoolers, it means being able to ask for help, show and express feelings and get along with others.

3. **Speech and language skills:** This is the ability to use and understand language. For babies, this includes cooing and babbling. In older children, it includes understanding what's said and using words correctly and in ways that others can understand.

4. **Fine and gross motor skills:** This is the ability to use small muscles (fine motor), particularly in the hands, and large muscles (gross motor) in the body. Babies use fine motor skills to grasp objects. Toddlers and preschoolers use them to do things like hold utensils, work with objects and draw. Babies use gross motor skills to sit up, roll over and begin to walk. Older children use them to do things like jump, run and climb stairs.

5. **Activities of daily living:** This is the ability to handle everyday tasks. For children, that includes eating, dressing and bathing themselves.

There is no one cause of developmental delays, but some risk factors include:

- **Complications at birth:** Being born too early (prematurely); low birth weight; not getting enough oxygen at birth.
- **Environmental issues:** Lead poisoning; poor nutrition; exposure to alcohol or drugs before birth; difficult family situations; trauma.
- **Other medical conditions:** Chronic ear infections; vision problems; illnesses, conditions, or injuries that have a significant and long-term effect on a child's day-to-day activities.

Sometimes parents worry that they might have contributed to their child's delays. That's usually not the case. For example, teaching a child more than one language does not lead to speech or language problems. And as one mother shares, even though it can be "heartbreaking" to hear the results of an evaluation, in the end, it's better to focus on next steps and ways to help.

1.1.2 Developmental disorders

It is a diverse group of chronic conditions that are due to mental or physical impairments. Developmental disabilities cause individuals living with them many difficulties in certain areas of life, especially in language, mobility, learning, self-help, and independent living. Developmental disabilities can be detected early on, and do persist throughout an individual's lifespan. Developmental disability that affects all areas of a child's development is sometimes referred to as global developmental delay. The most common developmental disabilities:

- *Down syndrome* is a condition in which people are born with an extra copy of chromosome 21. Normally, a person is born with two copies of chromosome 21. However, if they are born with Down syndrome, they have an extra copy of this chromosome. This extra copy affects the development of the body and brain, causing physical and mental challenges for the individual.
- *Fragile X syndrome* (FXS) is thought to cause autism and intellectual disability, usually among boys.
- *Pervasive developmental disorders* (PDD) are a group of developmental disabilities that can cause significant social, communication and behavioral challenges.
- *Fetal alcohol spectrum disorders* (FASD) are a group of conditions that can occur in a person whose mother drank alcohol during pregnancy.
- *Cerebral palsy* (CP) is a group of disorders that affect a person's ability to move and maintain balance and posture. CP is the most common motor disability in childhood.
- *Intellectual disability*, also (sometimes proscriptively) known as mental retardation, is defined as an IQ below 70 along with limitations in adaptive functioning and onset before the age of 18 years.

1.2 Causes of Developmental Deviation

Developmental disabilities are caused by many different factors such as genetic, brain anatomy, general physiology, environmental factors and socio-cultural factors. In our daily life, we can see many disabled people in the society whose developmental backgrounds are different. Some are having disability caused by genetics, some are disabled due to brain damage, distorted body parts and some are victimized due to degraded environment. Thus different type of disabilities are caused by different factors. In many cases it is difficult to pinpoint the exact cause of the damage or time when it occurred.

Many specific agents are known to cause developmental disabilities or to be associated with an increased risk of developing a disability and these are divided into five broad categories:

1.2.1 Genes and heredity

Children inherit more than physical characteristics from their parents; they also inherit predisposition to certain behavioral characteristics. Gene has been causal factor for carrying several type of disabilities like emotional and behavioral difficulty, criminality, attention deficits, hyperactivity, schizophrenia, depression, autism etc. in children. Disabilities are caused by genetics come from abnormal genes. Parents may pass these abnormal genes on to children or errors could arise when genes combine in the womb that causes intellectual disabilities. Abnormal genes can occur from infections during pregnancy or from things like overexposure to radiation from X-rays. The intellectual disabilities associated with several genetic diseases. Genetic causes are widely prevalent in several type of disabilities like physical disabilities, multiple disabilities, deafness, blindness, autism spectrum disorder, emotional and behavioral disorders etc. However, the disabilities mostly associated with genetic factors are related to intellectual and learning disabilities.

1.2.2 Brain anatomy and physiology

Brain is the most important and sensitive part of the human body situated inside the skull of the head. Most of our activities like thinking, cognition, metacognition and other many voluntary activities are controlled by the brain.

https://www.google.co.kr/search?q=brain+anatomy
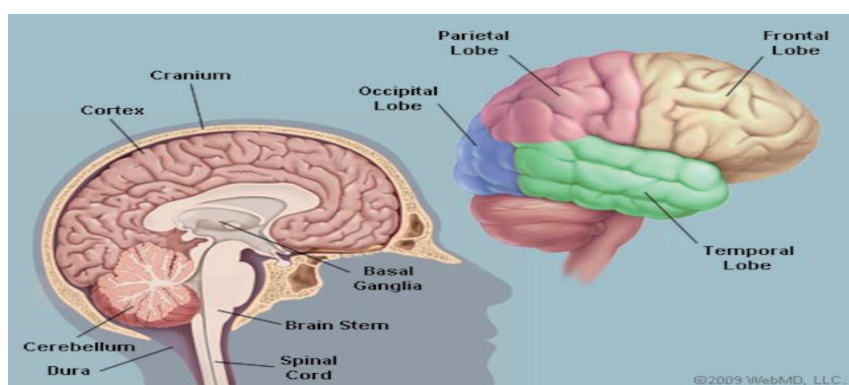
The brain is one of the largest and most complex organs in the human body. It is made up of more than 100 billion nerves called ganglia that communicate in trillions of connections called synapses. The brain is made up of many specialized areas that work together. The cortex is the outermost layer of brain cells. Thinking and voluntary movements begin in the cortex. The brain stem is between the spinal cord and the rest of the brain. Basic functions like breathing and sleep are controlled here. The basal ganglia are a cluster of structures in the center of the brain. The basal ganglia coordinate messages between multiple other brain areas. The cerebellum is at the base and the back of the brain. The cerebellum is responsible for coordination and balance. The brain is also divided into several lobes: The frontal lobes are responsible for problem solving and judgment and motor function; the parietal lobes manage sensation, handwriting, and body position; the temporal lobes are involved with memory and hearing. The occipital lobes contain the brain's visual processing system. The brain is surrounded by a layer of tissue called the meninges. The skull (cranium) helps protect the brain from injury.

When the anatomy of the brain is changes even in a pin point scale, it causes disabilities and this situation is called brain dysfunction. Brain anatomy is changed due to genetic reason, external trauma, stress, toxins and harmful rays. The disorders caused by change in brain anatomy include depression, anxiety disorders, bipolar disorder, attention deficit hyperactivity disorder (ADHD), and many others.

Human body is the complex mechanism working in harmony to accomplish several tasks. The body is the superstructure of many systems like reproductive, respiratory, urinary, digestive, circulatory system etc. When the systems inside the body function well harmonically, there is no any problem in the body, but when our body gets scarcity of certain chemicals, or nutrition or body gets some chemicals or nutrition more than necessary, the body shows reaction. In some cases, the reaction is so acute that it results into disability. When there is lacking of some nutrition responsible for strengthening tissues in the food taken, it degenerates some tissues of the body resulting into particular type of disability.

The biological factors that may have a significant negative effect on behavior are many and complex. It's important for educators to understand how genetics, parental neglect or abuse, malnutrition, and neurological damage may be linked to school failure and impulsive or antisocial behavior.

1.2.3 Environmental and socio-cultural causes

Environmental-risk factors in the life of the infant or child that interfere with development-are the major causes of disabilities of children by age 6. Some well-known environmental factors that interfere with development are child abuse, poverty and parental substance abuse (Kirk, Gallagher & Anastasiow, 2003). Parents who are unaware of the child rearing strategies that development are particularly at risk in rearing low birth weight or premature babies, conditions that are known to be associated with disabilities. Other risk occurs when family resources are too limited to provide adequate nutrition, medical care, and housing. These are briefly discussed below:

- **Child abuse or neglect:** Child abuse or neglect refers to any non-accidental behavior by parents, caregivers, other adults or older adolescents that is outside the norms of conduct and entails a substantial risk of causing physical or emotional harm to a child or young person. Such behaviors may be intentional or unintentional and can include acts of omission (i.e., neglect) and commission (i.e., abuse). Many of us may find it hard to understand the fact of child abuse whether the child is with or without disabilities. As many as 3 to 10 million children are abused or neglected, and 20 percent have disabilities.

- **Poverty:** Women who live in poverty are likely to have insufficient medical care (including parental care), poor housing, and inadequate nutrition. A pregnant woman's poor nutrition rarely affects her fetus; a fetus acts like a parasite, drawing on the mother for what it needs. However, the poorly nourished mother may have an infant that is very small at birth. If the expectant mother is a teenager living in poverty, she at great risk of having a pre-mature or low-birth-weight infant, who itself is at risk for a variety of disabilities. Teenage mothers who live in economically advantaged homes, have good parental care, and receive emotional support from their spouse or family are more likely to give birth to normal infants.

- **Substance Abuse:** Substance abuse by the parents can be linked to behavior problems and disabilities in children. A women's use of alcohol during pregnancy may result in her infant's having fetal alcohol syndrome or alcohol related disorders (Streiss-gath, 1997; as cited in Kirk, Gallagher & Anastasiow). Fetal alcohol syndrome children having facial abnormalities, droopy eyelids, heart defects, small size, and usually some degree of mental retardation. Physical anomalies and growth deficiencies such as this persist in later childhood. Alcohol-related

disorders are more difficult to detect as causes, but the disability may appear as significant learning disorders.

In all regions of the world persons with disabilities face attitudinal barriers, including prejudice, low expectations and even fear. Negative attitudes about disability impact on all aspects of the lives of persons with disabilities, including the ability to access education, to participate in non-exploitative work, to live where and with whom one chooses, to marry and start a family, and to move about freely within the community. Attitudes to disability are not always uniform within a region or even within a country. Different groups or individuals may have beliefs about disability that vary from those held by wider society and beliefs may vary even within small communities and within families. In African societies and other developing third world, there are examples of positive and empowering beliefs about disability. However, as is the case in many settings across the globe, disability is sometimes also associated with negative perceptions resulting in stigma, discrimination, exclusion and violence, as well as other forms of abuse of persons with disabilities. Thus, socio-cultural beliefs have great impact on creating or deteriorating disability in a child.

Furthermore, lack of representation and experiences of people with disabilities, pervasive stereotypes of people with disabilities are also the cause of disability. Stigmatization of physical and mental limitations ultimately become the cause of disability. The cultural attitude that physical or mental differences that deviate from "normal," but do not in and of themselves affect ability, are disabling (for example, facial scarring). Invisibility, stigmatization, stereotypes of disabilities and people with disabilities feel fear, ignorance, and pity in temporarily able-bodied people. Assumption that disability is a personal, family problem rather than a matter of social responsibility is also responsible for creating disability.

1.2.4 Other factors (Birth related complications, exposure to drugs, toxins and chemicals)

Birth related complications

When parents are awaiting the arrival of a new baby, they know that there are many steps that must be taken to ensure that the delivery is as safe and easy as possible. These steps always involve the help and support of a medical team that can include a range of professionals. Each person plays a key role, however, and most are involved almost from the earliest days of the pregnancy. The reason

that medical experts are so heavily involved in every phase of a pregnancy is to ensure that the baby and the mother are in the best condition possible. To do that requires regular checkups, the use of prenatal vitamins, different kinds of imaging to monitor the baby's health and even exercise classes to support and assist during childbirth.

All of this teamwork can, sometimes, make it easy to forget that problems can and do occur right up to the moment a baby is born. For example, a baby may have a birth defect that remained undiagnosed until the day the baby arrives or something can go wrong during delivery and the baby is injured. Sadly, as experienced and professional as any medical team can be, it is still made up of human beings who are fallible and who can make terrible mistakes. If mistakes are made, it is usually called a birth trauma or a birth injury. It is not, however, a birth defect.

Birth time is the most critical period of human life in terms of complications arise during delivery. It is critical for both infant and mother. Cerebral Palsy is one which is most prevalent in children. Complications that increase a child's chance of developing Cerebral Palsy can arise during pregnancy or during labor and delivery. Formerly, it was believed a complicated birth (in combination with asphyxia) was the sole cause of Cerebral Palsy. Now it's known that complicated birth in combination with asphyxia accounts only for a relatively small percentage of Cerebral Palsy cases, less than 10%.

Exposure to drugs, toxins and chemicals

It should not be surprising that fetal drug exposures have been linked to a wide variety of brain deficits. For pregnant women using drugs can easily cross the placenta and can affect fetal brain development. *In utero* exposures to drugs thus can have long-lasting implications for brain structure and function. These effects on the developing nervous system of the brain. Legal drugs such as alcohol and nicotine also represent a significant hurdle regarding unintended effects on the fetus.

Modern mechanistic approaches have informed us greatly as to how to potentially ameliorate the induced deficits in brain formation and function, but conclude that better delineation of sensitive periods, dose–response relationships, and long-term longitudinal studies assessing future risk of offspring to exhibit learning disabilities, mental health disorders, and limited neural adaptations are crucial to limit the societal impact of these exposures.

Moreover, drugs can alter fetal development through a wide variety of mechanisms. For example, if the drug crosses the placenta (and the vast majority of drugs of abuse do cross), then it can directly act on its molecular target in the fetus. Drugs can also act directly on the uterus and/or placenta. These effects would include altering placental secretory activity or utero-placental blood flow, for example. Finally, the drug can produce effects on the mother's physiology that may secondarily influence the fetus, such as increased secretion of stress hormones or altered maternal health behaviors attributable to the mother's addiction.

Hence, the use of drugs by the pregnant women have several effects on mother and newly born child. It has even complications during delivery resulting mental and physical damage. There are several such drugs abuse of which can result into different type of disability in the children. For example, use of antibiotics during pregnancy can lead to several physical and mental disability of the children.

The effects of a toxic chemical on human body may be either acute or chronic. Acute (short-term) effects show up immediately or soon after exposure to the chemical. They may be minor, like nose or throat irritation, or they could be serious, like eye damage or passing out from chemical vapors. What all these effects have in common is that they happen right away. Chronic (long-term) effects may take years to show up. They are usually caused by regular exposure to a harmful substance over a long period of time. These effects are usually permanent. Some chemicals cause both acute and chronic effects. For example, breathing solvent vapors might make you dizzy right away (an acute effect). But breathing the same vapors all the time for many years might eventually cause liver damage (a chronic effect).

1.3 Effects of Developmental Deviations

Most of the students follow the same sequence of development. Some children have different course of development deviating from normal development. Developmental deviations leads the children lacking in learning certain social skills, personal care skills, and also their physical development is obstructed or deformed, mental development may be slow and their communication is disturbed. Children lag behind in several activities at home, school and community. Developmental deviation becomes a leading cause of disability for further deteriorating the condition. Developmental deviations limits a child from learning further skills and leads the child to be more dependent in the later life. Every child learn specific skills and acquires knowledge at a certain point of life; when the child is

developmentally deviated, he/she cannot learn the skills and behaviors and knowledge at the right time. The child has to pass through the period of extreme adjustment which makes him feeling loneliness, hopelessness, physical complications and behavioral problems. These are some effects of developmental deviations:

1.3.1 Self-adjustment:

Self-adjustment is adjusting itself to meet varying requirements. An individual has to do many things independently to live. To keep the secrecy of some personal affairs, one has to learn self-adjustment skills. Self-adjustment reduces the level of dependency and helps to learn how to survive. Self-adjustment skill ranges from personal skills to social skills which are required by the child to adjust him/herself in the society. The child should learn the skills which are required in the various situations of his life to adjust in the contemporary environment.

A Child who is passing through a condition of developmental deviation, may have lacking in such skills. The deviated developmental trajectory of the child devoid the child from learning self-adjustment skills.

1.3.2 Learning

One of the questions posed by researchers in this area is "Do children with developmental deviations follow the same developmental pattern, only slower, or do they have a unique pattern of development in term of cognitive process? Weisz (1999) synthesized the results of many experiments and came to the conclusion that the evidence strongly supports a similar developmental sequence with children with mental retardation or developmental disabilities, only slower. This raises another issue, that of learned helplessness. If the child with mental retardation consistently fails on tasks, does he or she have a tendency to quite trying because of a feeling of learned helplessness built up by consistent failure in academic tasks and situations? We can think on our own abilities in some sports. If we are not able to kick the ball well in soccer and cannot run fast, isn't there a strong tendency to abandon that game in favor of something that provides some measure of success?

Several studies that matched children with mental retardation with non-identified children of the same mental level indicated that following failure experiences, the children with developmental disability showed a significant decline in the use of effective problem-solving strategies. Their slow cognitive development and learned helplessness becomes a significant challenge in inclusion, since children

with developmental disability can hardly fail to see that their own performance does not match those of the typical children in the classroom.

1.3.3 Communication

The ability to develop language is one of the great achievements of humans, and there always has been curiosity as to how, if at all, language development is changed or modified in children and adults with developmental disability. The close link between language and cognition has long been noted as well as its reciprocal interaction. Not only is language limited by cognition, cognition (critically thinking, planning and reasoning) is limited by language. In addition, there is the problem of limited input and improvised database during the language learning years that can add up to an impoverished linguistic system. Recently, the study of language in persons with developmental deviations has become more complex in two specific ways. First, an increasing attempt has been made to study the elements of language for such children separately so that *semantics* is separated *from pragmatics* and *phonology*, and also the study of language development of children with specific etiologies. Children with Down syndrome can be compared with children with Williams Syndrome.

The question is to whether language develops in the same fashion, only slower, with children with developmental disabilities and mental retardation or in a special fashion has been answered largely in favor of the choice. It is largely just slower; for example, a child at age 5 would match in linguistic skills a child of 10 with mental retardation whose mental age was 5. Yet there are intriguing variations on this generalizations. Children with Down syndrome have retardation in language (pragmatics and semantics) even lower than that of their general mental deficit, while children with Williams's syndrome seem to have advanced language beyond their general mental abilities. This puzzle guarantees that there will be much more research on those topics in the near future.

1.3.4 Adaptation

Adaptation has become critical for the child with developmental disabilities, both in the classroom and later, in vocational settings, it is important to determine with barriers stand in the way of social adaptation. A study in the interpretation of social cues was revealing in this regard. One hundred seventeen students in elementary grades, with and without developmental disabilities, were shown video tapes depicting various social conflicts. The child who watched the video interpreted the situation

that the other child was being mean. They were focusing on the negative outcome of the event and ignoring social cues that would indicate that the event was an accident.

They also more often referred to an adult authority to solve the social crisis, rather than suggesting social strategies for resolving the incident. These results suggest a reason why children with mental retardation or developmental disabilities are not well received in peer groups and also point the way to some necessary curricular additions for them. They clearly need practice in identifying social cues so that they can better interpret social situations and also should have practice through role-playing or discussions about useful strategies for pro-social interaction. One of the helping roles that the special educator, working as a collaborator with the general education classroom teacher, can play is to provide such experiences in some group situations and help children with MMR to work out their own strategies for response.

Let Us Sum Up

In developmental deviation, the developmental process does not follow the developmental patterns which are considered 'normal'. Because of inherited genes and some environmental factors, many children either follow abnormal course of development or their development are delayed. Delayed development or developmental deviations both carry problems on the children. Genes and heredity, abnormal brain anatomy and physiology, environment and socio-cultural causes and complications during birth etc. are the causes of developmental deviation. Developmental deviations have effects on self-adjustment, learning, communication and adaptation.

Unit-end Activities

Group "A"

Objective questions:

Tick (√) the best answers

1. When a child does not achieve developmental milestones within the normal age range, it is said be
   a. **Developmental delay**
   b. Developmental deviation
   c. Developmental disorder
   d. Developmental disability

2. Which of the following disability is not related to developmental disorder?

   a. Down syndrome

   b. Fragile X syndrome

   c. Juvenile arthritis

   d. Pervasive developmental disorders

3. Our nervous system consists of 100 billion nerves called….

   a. neurons

   b. spinal cord

   c. ganglia

   d. cortex

4. Which of the following item does not belong to the environmental and socio-cultural factors as a cause developmental deviation?

   a. Child abuse or neglect

   b. Poverty

   c. Substance abuse

   d. Some festivals of a particular tribe

5. Which of the following is the effect of developmental deviations?

   a. Self-adjustment

   b. Learning

   c. Communication

   d. All of the above

Group "B"

Short answer questions:

1. What do you understand by developmental deviation?

2. Describe how children with developmental deviations are affected in communication?

3. How child abuse and neglect leads to developmental deviation? Explain.

4. What is called disorder? List the name of developmental disorders.

Group "C"

Long answer questions:

1. What do you understand by developmental delay? What are the areas of development of the child which might be delayed? Explain.
2. What are the causes of developmental deviation? Describe environmental and socio-cultural aspect as a cause of developmental delay.

Points of Discussions

- Developmental delay and developmental disorder
- Role of genes and heredity in developmental disorders
- Exposure to drugs, toxins and chemicals causing disability
- Effect of developmental deviation in self-adjustment

Unit II: Identification of Children with Special Needs

2.1 Concept of Identification

Every child is unique. Children have their own strengths and weaknesses. Their development progresses according to certain sequences, but the pace may vary. It is natural that some children may excel in certain areas but have deficiencies in other areas. However, if children display marked problems or difficulties in one (or more) developmental area(s), and their performance shows significant discrepancies compared with other children of the same age, it is advisable to refer the children for professional assessment.

Normal Variations	Problems	Disorders
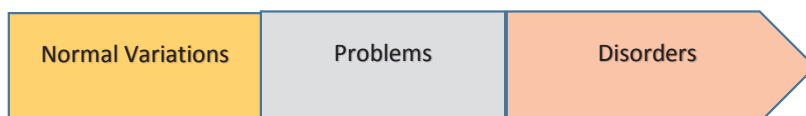
Children progress rapidly in their early years and lots of changes are expected in a year or even a month's time. Because of this, even experts may find it difficult to make a firm diagnosis based on a young child's conditions. On the other hand, it is precisely the plasticity of children's development that makes early identification and intervention important. With early identification of children's developmental and learning problems and prompt referral for assessment, it helps us understand and support the children's conditions and needs in development and learning.

Causes of child's problems: Developmental and learning problems of children may be associated with a combination of factors. The child's own developmental conditions or other environmental factors, such as the family, school or society, may play a part.

```
            Children's Developmental
                   Conditions
                        |
                        v
Society  ->      Children's Problems      <-  Family
                        ^
                        |
                     School
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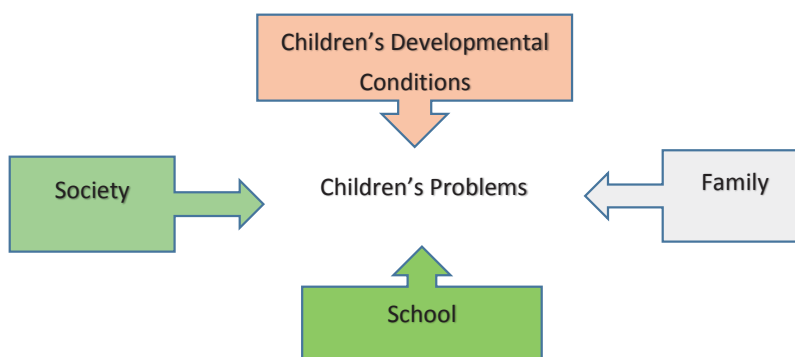
Therefore, when children exhibit a particular learning, emotional or behavioral problem, apart from being aware of the severity, duration and frequency of this problem, teachers should also gather information from different sources to understand every possible factor that may attribute to the children 's behavior. Sometimes, a problem may be caused by different factors. For instance, if children are inattentive and cannot concentrate in class, the possible reasons are:

- They have problems in attention control.
- Recent family conflicts have upset them and affect their concentration in class.
- The noisy environment of the school easily distracts their attention.
- The curriculum may be too difficult for them such that they lose interest in class.

Hence, teachers should pay attention to the various factors when observing children's performance.

What is Identification?

Timely identification of impairments, a secondary prevention, can reduce the impact of the impairment on the functional level of the individual and also in checking the impairments from becoming a disabling condition. Initially they need to be identified as soon as possible at home by the parents and outside (schools/ sub - health centers/ through camps), and then they need to be assessed through a team of specialists to plan necessary intervention

Home

Parents can observe and identify the children with disabilities by using the following checklist for early identification of disabilities:

Hearing impairment

Screening new born

- Is there anyone in the family with deafness since childhood?
- Did the mother take an abortificient drug or any other medicine in large doses during the first three months of pregnancy?
- Is the birth weight below 1500 grams?
- Did the child have a delayed cry after birth?

- Did the child have significant jaundice (yellowness of eyes) during the first10 days after birth?
- Does the child have a cleft in the lip or palate, or a malformed pinna?

Screening children in the age group of 6 months to 2 years:

- Does a child turn towards the source of sound which is located either at the back or towards one side of the body?
- Does he/she have discharge from the ear?

Screening children above 2 years age

- Does he/she turn when called from behind?
- Uses gestures excessively
- The child does not speak or has a defective speech.
- The child does not understand the spoken language.
- The child has an ear discharge.

Visual Impairment

- The child does not follow an object moving before his eyes by 1 month's age.
- The child does not reach for toys and things held in front of him by 3 months age.
- One eye moves differently from the other; including squint
- Eyes are either red or have a yellow discharge or the tears flow continuously.
- The child has tendency to bring pictures or books very near the eyes.

Intellectual disability

- Does the child respond to name/voice by 4th Month?
- Does the child smiles at others by 6th Month?
- Does the child hold the head steadily by 6th Month?
- Does the child sit without support by 12th Month?
- Can the child stand without support by 18th Month?
- Can the child walk well by 20th Month?
- Can the child talk 2 -3 word sentences by 3rd Year?

- Can a child eat/drink by himself by 4th year?
- Can he tell his name by 4th year?
- Does he have toilet control by 4th year?
- Does he avoid simple hazards?
- Does he get fits?

Locomotors disability

- The child is not able to raise both the arms fully without any difficulties.
- The child is not able to grasp objects without any difficulty.
- The child has absence of any part of the limb.
- The child has a difficulty in walking.

Sub - health centers - primary health centers

India has a well-established network of Primary Health Centers, each catering to a population of 30 to 40 thousand. These have sub - health centers at the field level. Each sub - health center caters to a population of around 3000 persons and is managed by one female health worker. Under the program of MCH (Mother & Child health) the worker takes care of the children by providing immunization, and vitamin A supplementation to children below 6 years of age. She also identifies the health problems which may lead to disability and takes further preventive action.

School

Teachers in all the primary, upper primary and secondary government schools have a responsibility to identify children with disabilities.

Check list for identification of children with special needs: (School teachers and parents should use this check list).

Visual impairment
- Watering of eyes
- Recurrent redness
- Often irritation
- Frequent blinking

- Squint
- Inappropriate stumbling over objects or bump into other people
- Tilting of the head or closure of one eye
- Headache while doing fine work
- Difficulty in counting the fingers of an outstretched hand at a distance of one meter
- Moving head side to side while reading
- Difficulty in recognizing distant objects
- Difficulty in doing other fine work requiring perfect vision
- Holding books too close or too far from the eyes
- Frequently ask other children when taking down notes from the black board
- Exhibit difficulty in reading from the blackboard
- Hitting against the objects on the side.

Note: *If any of the above 4 responses are yes, then the child should be properly examined by a qualified ophthalmologist to see if the existing condition can be improved by medical treatment or by using spectacles.*

Hearing impairment

- Malformation of the ear
- Discharge from ear
- Pain in ear
- Irritation in ear
- Trying to listen from a closer distance
- Ask for the instructions repeatedly
- Not able to write properly
- Trying to listen to the echo reflection rather than from the speaker
- Make errors while copying from black board
- Frequently ask a colleague to show his workbook
- Problems in paying attention in the class
- Favor one ear for listening purposes
- Problems when anyone speaks from behind
- Child speaks loudly or too softly

- Exhibit voice problem and mispronunciation
- Tune the TV/Radio too loud
- Irrelevant answers
- The child keeps away from his age mates
- The child is unable to respond when you call from the other room
- The child understands only after few repetitions.

Note: *If any of the above 3-4 questions elicits response that indicates some kind of hearing/speech loss, then the child should be carefully examined by a qualified ENT specialist, an audiologist, and also by a speech therapist for complete evaluation. In case the child is below 4 - 5 years, a psychologist should also be consulted to address and identify any associated psychological problems which may not be overtly evident.*

Speech

- Inappropriate sound in speech
- Stammering
- Baby speech
- Inability to learn correct sound and use incorrect speech
- Incomprehensible speech

Physical disabilities

- Deformity in neck, hand, finger, waist, legs
- Difficulty in sitting, standing, walking
- Difficulty in lifting, holding, keeping things on floor
- Difficulty in moving or using any part of the body
- Difficulty in holding pen
- Using a stick to walk
- Jerks in walking
- Lack bodily coordination
- Epileptic behavior/have tremors
- Joint pains

- Any part of the body is amputated.

Note: *If answer to any of the above written statements is positive, the child should be carefully examined by a qualified orthopedic surgeon and referred to a physiotherapist &/or prosthetic/orthotic technician as needed.*

Intellectual disability

- If the child does not sit unassisted even much after 12 - 15 months
- Or starts to walk much after 2 ½ years
- Or starts to talk even much after 2 ½ years
- If a child has undue problems in doing independently any of the following activities by the age of 6 years
- Eating
- Dressing or
- Toilet activity
- Problems in holding a pencil/ or using a scissors
- Unable to play with a ball; or play 'guilli -danda' with his peers
- Frequent tantrums, while playing with the peers
- Usual inattentiveness to the spoken speech or address
- Requires too many repetitions to remember simple things
- Problems in naming even 5 fruits, vegetables or plants
- Problems in naming the days of the week
- Exhibit problems in expressing the needs in a clear language unlike the other peers
- Unable to concentrate on tasks even for a short period of time
- Inappropriate oral responses
- Difficulty in performing daily routine work
- Poor comprehension of lessons taught in the school class
- Difficulty in learning new things
- Difficulty in conceptualization
- Does not get well along with the children of same age group
- More efforts are required in learning or practicing as compared to the peers
- Takes an unreasonable amount of time in perfecting any work

- Poor academic achievements
- Show an undue dependency on visual clues or material for learning.

Note: *If the responses to any of the above 4 indicators is positive when compared to the average school going peers of same age group & class then the child should be properly assessed by a qualified psychologist or a teacher who is specially trained to take care of the mentally challenged children.*

Learning disabilities

- Difficulty in counting
- Lack of concentration or easily distraction by the surroundings, either at home or school
- Difficulty in sitting quietly in the classroom
- Does not write down the spoken words correctly
- In appropriate additions to the right word; e.g. 'ischool' in place of school
- Always confused between Right & Left
- Unreasonable difficulty in remembering the verbal instructions
- General difficulty in memorizing the things
- Extreme restlessness in a child which significantly interferes with the timely completion of various tasks
- Reverses letters or symbols too frequently while reading for example b as d, saw as was, etc.
- Reverses numbers too frequently while reading or writing for example 31 as 13, 6 as 9, etc.
- Excessive errors during reading like loses place or repeat / insert/ substitute/omit words
- Poor in mathematical calculations
- Problems in accurate copying from the common sources like a book or a blackboard, even though the vision is normal.
- Write letters or words either too close or too far (spacing problems)
- The child appears to comprehend satisfactorily but is not able to answer the questions.

2.2 Screening as a Strategy of Early Identification

Screening is a process to identify the problems faced by a child during his/her development at the early stages of life. Screening basically involves tests to measure the level of development in various aspects like development of body parts, emotion and behavior, speech and communication, hearing

and vision etc. Different screening tools are used for different purposes and the result of the test is used to take decision for pre-referral process.

Developmental screening is designed to identify problems or delays during normal childhood development. When properly applied, screening tests for developmental or behavioral problems in preschool children allow improved outcomes due to early implementation of treatment. Developmental delays or behavioral problems that can be identified by screening programs include learning disabilities, speech or language problems, autism, intellectual disability, emotional/behavioral conditions, hearing or vision impairment, or attention deficit hyperactivity disorder (ADHD). Less than half of these problems are identified before the child reaches school age, meaning that the problems may have worsened and critical intervention opportunities have been missed during the preschool years. Studies have shown that children who receive early intervention and treatment for developmental disorders are more likely to graduate from high school, to hold jobs as adults, and are less likely to commit criminal acts than those who do not receive early intervention.

Developmental screenings are done by physicians or other health care professionals in clinics and doctors' offices, community health departments, or schools. Professionals use a variety of tests and checklists to determine if a child is developing normally. These tools are designed to identify potential problems and do not establish a diagnosis of any particular disorder. One example of a commonly-used screening tool for children aged 0 to 6 years old is the Denver Developmental Screening Test (DDST). Many of the tests evaluate so-called "developmental milestones," or steps in development that a child should reach by a given age (for example, a seven-month old should respond to his/her name and be able to transfer objects from hand to hand).

A list of accepted developmental milestones is provided online by the U.S. Centers for Disease Control and Prevention (CDC). Screening of children involves examination of all aspects of development, including social/emotional behavior, vision and hearing, motor skills and coordination, cognitive abilities, and language and speech. Since early detection and treatment can be critical for a child's prognosis, all children should undergo developmental screening at every well-child checkup. It is important to remember that children develop at different rates, and a normal child may develop faster than average in one area and slower in another.

2.3 Types of Screening for Identifying Children with Special Needs

States, districts and schools have the flexibility of using different screening methods. In some cases, this is done on a broad scope. In other words, the screening does not have to be done only when you are in a one-on-one session with a student. Screening can take place through large group testing, or you may screen students in smaller groups through activities and discussion. Another way of screening students is through observation. In some cases, you may see a potential area of concern in a student and speak with a special education teacher as a form of screening. It is important to note that schools do not have to gain parents' permission to screen students. Screening process is broadly categorized into following two types:

2.3.1 School-based screening

School-based screening—particularly when facilitated by a web-based system to efficiently collect and score the screeners, making the information immediately available—has the potential to overcome the school-to-Primary Care Physicians communication barrier, uses the key teacher data needed for the referral, and may provide earlier identification of children at risk than parent-initiated assessment. Because school-based screening can lead to earlier intervention for at-risk children, it could possibly change the trajectory of problems before symptomatic behaviors become too entrenched. School-based screening results could be used to motivate parents to communicate with their child's PCP (primary care physicians) about their child's risk and to seek out further assessment. Furthermore, for children eventually identified with at risk, teacher ratings that are completed online can be routinely accessible to the PCP, allowing critical school data to be available at the time of a clinical visit rather than requiring a return visit, which may be months later. School-based screening to identify children at risk can be of great benefit in initiating services for these children.

- **Case identification** and individual case detection offer appropriate approaches for schools to determine which students have disability. In contrast, the scientific literature indicates population-based screening and population-based case detection in schools as not recommended. Case identification uses existing information, usually from standard school forms, to identify students with diagnosed at risk.
- **Individual case detection** occurs when students not diagnosed with risk present to health rooms with symptoms of the illness.

- **Population-based screening** uses tests, examinations, or other procedures applied rapidly to populations to identify apparently well persons who probably have disability
- **Population-based case detection** uses surveys, tests, examinations, or other procedures to rapidly identify students with symptoms who may be at risk but not be diagnosed.

Case identification

Strategies for addressing Asthma within a coordinated School Health Program recommends case identification. Most schools have systems in place for case identification, and thus do not require substantial additional resources to implement this approach, which includes reviewing health histories, reports of physical examinations, and annual emergency cards to develop confidential lists of students with health concerns such as asthma. Schools should focus initially on students with significant asthma morbidity as demonstrated by frequent absences, school health office visits for acute care, emergency department visits, or hospitalization. Parent surveys and referral letters recommending additional care sent to parents of students with previously diagnosed asthma can identify students with uncontrolled asthma and lead to increased medical care and changes in medications. Schools should examine their current case identification system. Are they already identifying students with risk, especially those with significant morbidity? If not, can the system be improved? Some schools added a check-off box, "Does your child have disability?" to the health history or annual emergency card. Incentive programs may improve low return rates. Some schools need to designate a person (usually the school nurse) to review forms and compile information.

Individual case detection

Individual case detection of disability constitutes a basic school health service for any symptomatic student. For example, when school nurses document repeated episodes of undiagnosed wheezing in a health appraisal, they detect a possible illness. The nurse refers the family to the student's primary care provider for an evaluation. The nurse also makes referrals to promote enrollment in health insurance programs, help a student without a primary care provider to find one, or obtain additional medical care for uncontrolled disability symptoms.

Population-based screening

Population-based screening does not currently meet American Academy of Pediatrics (AAP) criteria for an effective school screening program. The most important limitation involves lack of evidence that early treatment of currently asymptomatic people who later could develop risk improves their health. In addition, experts do not agree on an appropriate screening test. For example, screening with spirometry for children with asthma proves feasible for some schools, but a review of school-based spirometry screening by Abramson and colleagues concluded that few children are identified for further evaluation, and many seem to have no asthma-related symptoms. Without further study, they could not recommend spirometry for school-based asthma screening. Boss et al. concluded that, given the incomplete understanding about the natural history of asthma and lack of a test to identify asymptomatic persons who will develop the disease, true screening for asthma is not currently possible.

Population-based case detection

The current literature does not support conducting population-based case detection programs for disability in schools. Several studies documented that surveys to detect specific cases are feasible, but no study confirmed that identifying these students ultimately improved their health. One study found that parent surveys did not increase new diagnoses of asthma. An appropriate research activity could involve examining effectiveness of population-based case detection in settings for students with easy access to comprehensive health services. School-based health centers may provide appropriate sites for population-based case detection if equipped to conduct complete evaluations (including spirometry in case of asthma), provide appropriate medicines, and assure follow-up care, and if all students with known for e.g. Asthma are already under control. At this time, however, effectiveness for prevention and cost-effectiveness of such case detection remains unknown.

School-based surveillance

Surveillance involves the ongoing, systematic collection, analysis, and interpretation of health data essential for planning, implementing, and evaluating public health practice. Questions used for disability surveillance may be similar to those used for case detection programs, but health departments typically use at risk surveillance systems to count – not identify – children with the disease.

This important activity may not be necessary in every community or school. Communities and schools need to carefully assess costs and benefits of local risk surveillance.

2.3.2 Community-based screening

Community-based screening is a quick and efficient way of testing event with high level of accuracy. It is a simple process administered in the mass to find the risk associated with the individual child. This type of screening is good for those who live far from a testing center, those who afraid to carry their children to the testing center, or the parents who have tight schedules and cannot miss a single day from work, and those who are uninformed or misinformed.

Community-based screening is important because it consumes 15-20 minutes of time as compared to standard testing which takes long waiting time around one to two hours. Simply some kit containing test chemicals which are approved by World Health Organization are used during community-based screening. This screening system intends to eliminate the shortcomings of standard testing. This needs a test kit, a agent, and a trained change or a counselor who underwent Community-Based orientation.

As this process takes 15-20 minutes; and while waiting for the result, the counselor will talk you through the entire process and discuss silent information about the case. Clients are also provided time to ask any concerns regarding the test. Such Community-based Screening process is open for all regardless of age, gender, race, or socioeconomic status. All personal information and contacts are handled with strict confidentiality.

2.4 Areas for Screening of Students with Special Needs

In some instances, screening may reveal the need to move forward with a more formal 'assessment' or 'evaluation' process. Unlike initial screening, the parents must give permission to the school before a child is evaluated for special education services. Assessment for special education determines a student's current achievement level and educational needs.

When parent take their child to a well visit, doctor or nurse will also do developmental monitoring. The doctor or nurse might ask parent questions about their child's development or will talk and play with the child to see if he or she is developing and meeting milestones. A missed milestone could be a sign

of a problem, so the doctor or another specialist will take a closer look by using a more thorough test or exam. Your childcare provider can also be a valuable source of information on how your child develops.

Moreover, developmental screening takes a closer look at how a child is developing. Your child will get a brief test, or you will complete a questionnaire about your child. The tools used for developmental and behavioral screening are formal questionnaires or checklists based on research that ask questions about a child's development, including language, movement, thinking, behavior, and emotions. Developmental screening can be done by a doctor or nurse, but also by other professionals in healthcare, community, or school settings.

Developmental screening is more formal than developmental monitoring and normally done less often than developmental monitoring. Your child should be screened if you or your doctor have a concern. However, developmental screening is a regular part of some of the well-child visits for all children even if there is not a known concern.

The American Academy of Pediatrics recommends developmental and behavioral screening for all children during regular well-child visits at these ages:

- 9 months
- 18 months
- 24 or 30 months

If your child is at higher risk for developmental problems due to preterm birth, low birth weight, environmental risks like lead exposure, or other factors, your healthcare provider may also discuss additional screening. If a child has an existing long-lasting health problem or a diagnosed condition, the child should have developmental monitoring and screening in all areas of development, just like those without special healthcare needs. Different forms of screening process, particular materials are used to assess students. The type of evaluation to be used is determined by what the trained professional is trying to measure. Schools must use more than one standard testing instrument to determine students' needs. A thorough evaluation will look at all of the following skills areas:

2.4.1 Intellectual functioning

Intelligence tests provide at least one measure of ''general intellectual functioning'' and are usually administered by clinical psychologists in community settings and by school psychologists in schools. General intellectual functioning typically refers to one's global or overall level of intelligence, often referred to as IQ (intelligence quotient). Higher IQ scores are assumed to mean that the individual has higher intellectual functioning.

These children may have relatively weak global learning abilities have significantly weaker performance in every aspect compared with other children of the same age. They are usually slower in acquiring new skills and knowledge, more difficult to adapt to new environments and things, more reluctant to take challenges and also tend to be more dependent. Have difficulty understanding and grasping the content of the subjects (e.g., language, general studies and arithmetic); or fail to generalize their acquired knowledge for application to other situations despite repeated instruction. Take a longer time to learn and practice new skills, e.g., in art and crafts and in playing games. Be constantly in need of individual guidance from teachers during class or in completing class work. Some children may have problems in certain subject areas only. A common problem is in word learning.

These children may:

- Forget easily how to read or write words even with repeated practice.
- Often mix up words with similar sounds, meanings or written forms, e.g. writing "goat" as "boat" and reading "ears" as "eyes".
- Be slow in reading and sometimes skip words or lines.
- Copy words with difficulty. They are slow, and often make mistakes in copying.
- Have mirror writing (e.g. "b" becomes "d" and "p" becomes "q").

Teachers should be aware that it is common for pre-primary children to have mirror writing, reversal of word parts and addition or omission of strokes when they are learning to write. The situation will usually improve when they enter primary school. Therefore, teachers should observe the overall performance of the children's word learning instead of being alarmed by a single sign. The severity and the frequency of the problems should also be taken into consideration.

2.4.2 Adaptive behavior

The adaptive behavior means the effectiveness or degree with which an individual meets the standards of personal independence and social responsibility expected for age and cultural group" (Grossman, 1983). It is the collection of conceptual, social, and practical skills that have been learned by people in order to function in their everyday lives.

Adaptive skills are:

- age-related
- defined by the expectations or standards of other people
- modifiable
- defined by typical performance

Motor skills: Typical preschool-age children use motor control and motor coordination to blink eyes, hold something, moving hands, kicking with legs, walk, and play. They manipulate blocks and books and they use crayons and pencils to write and draw.

Personal care: Typical preschool-age children are able to perform personal care tasks, such as feeding, dressing, brushing teeth, toileting, and washing hands.

Not all children will have Not all children will have age -appropriate adaptive skills appropriate adaptive skills when they begin school. Therefore, we must provide instruction and practice instruction and practice opportunities for children to develop adaptive skills.

2.4.3 Positive attributes

Positive attributes consists of several such characteristics of a child which are considered positive behaviors. Child shows many such positive characteristics like active, ambitious, cheerful, cooperative, easy going, fast, forgiving focused etc. during the test administration. The child with positive attributes is usually active, logical, particular, pleasant, thoughtful and warm. People having attributes are positive in nature, and sees the things in the world with positive and optimistic way, they are confident and self-dependent. Early detection of these attributes may guide what type of intervention is needed in the later life.

2.4.4 Speech and language

The Individuals with Disabilities Education Act (IDEA) defines a speech and language disability as "a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance. Children with speech and language disorders function well below the norm for their age in one or more aspects of speech or language. Speech and language development in children is a dynamic process. Language encompasses the understanding, processing, and production of communication. Language has been described as a code made up of rules that include what words mean, how to make new words, and how to combine words together. Understanding what word combinations are best in what situations is also part of the language code. Speech is the verbal communication of language.

Similarly, Speech and language development is considered a useful indicator of a child's overall development and cognitive ability by experts and is related to school success. Identification of children at risk for developmental delay or related problems may lead to intervention services and family assistance at a young age when chances for improvement are best. This rationale supports preschool screening for speech and language delay, or primary language impairment/disorder, as a part of routine well child care. A speech or language delay implies that the child is developing speech or language in the correct sequence but at a slower rate than expected, while a speech or language disorder suggests that the child's speech or language ability is qualitatively different from typical development.

Screening for speech and language disorders has been defined as using standardized tools to detect the risk of a delay, which can be corroborated by a full-scale diagnostic evaluation. Screening for speech and language disorders in clinical practice most often occurs in pediatric outpatient clinics in the context of routine developmental surveillance and screening. By surveillance we mean the informal checks about developmental progress that occur during routine well-child visits; surveillance is also known as monitoring.

A variety of tools have been used to screen for speech and language delays; many are part of a broader screening for developmental delays. Some screening tools are designed to be administered to the child; others are checklists that are designed to be completed by a parent or teacher. Often primary care providers use broad-band instruments that screen for a variety of developmental issues.

One such instrument is the Parents' Evaluation of Developmental Status questionnaire, Denver II, and the Ages and Stages Questionnaire (ASQ). Some narrow-band screening instruments for speech and language include the Language Development Survey (LDS) and the MacArthur-Bates Communicative Development Inventory (CDI); parents complete these screening instruments, but they can be scored by a primary care provider.

Once a child is diagnosed with a speech-language disorder, he or she is typically referred for therapy. Therapies and treatment plans for childhood speech and language disorders are highly variable and are commonly individualized to the patterns of symptoms exhibited by a particular child. Treatments are designed to adapt to the child's interests, personality, and learning style, and to address the priorities of the child, parents, or teachers based on the functional impact of the child's disorder in different settings.

2.5 Major Screening Tools for Children with Special Needs

Technology is truly everywhere and its widespread adoption in various applications influences almost every aspect of modern life. Amongst them, the society's prospect of the ICT (Information and Communication Technologies) role in education has also changed. Today children seem to be more involved in the learning process, because they have the advantage of the technology special means to support their assignments. ICT in education can make teaching and learning more effective and efficient as they do not involve just learning about technology, but learning with technology. The early identification of speech, language and behavioral disorders or delays is a crucial first step in the effective prevention of developmental and socio-emotional problems and children's early cognitive and language development has bearing on later development and readiness for learning and social competence.

On the other hand, computer capabilities, if used appropriately and responsibly, can expand the resources and improve the efficiency of language learning and assessment. Moreover, screening measures offer a brief snap- shot of child development. One of the first types of screening tools was found in Spartan society where an assessment similar to an Apgar test was used with newborns. If children failed the test, their lives were terminated. Fortunately, we have progressed and now use better methods to get children the help and support they need. Today we use developmental screening measures in an early detection system aimed at locating children with difficulties who are in need of

early intervention or early childhood special education services. Screening measures can also be used in a tracking program, or developmental surveillance, to monitor children who are at risk for developing a disability.

However, at this time, empirically validated screening practices, procedures, and tools to identify children who require specialized supports and services are limited. Thus, it is important to have an evidence base for modern methods of screening young children for analyzing their strengths and their weaknesses. The most important benefit of early detection is the fact that it does not entail the pupil's school failure, as is the case with the classical diagnostic process, which requires the student to have been taught systematic reading and writing in order to initiate the identification process. On the other hand, in the case of early detection of difficulties experts are based on well-documented assessment indicators that are easy to be used and evaluated at the pre-school age. In the light of the above statements, educators know that children entering kindergarten vary in their early experiences, skills, knowledge, language, culture and family background. Social-emotional development and health and physical well-being require as much emphasis as cognitive development, since all areas of development are connected. Communities, families and early childhood providers all play a role in providing nurturing, safe environments that promote healthy development for each individual child. Some of the important screening tools are given below:

2.5.1 Developmental screening tests

A widely used screening test for developmental delays is the Denver II. It can be used with children from 2 weeks to 6 years of age, using both testing-observation and a parent report format. The Denver II assesses 125 skills arranged in four developmental areas: gross motor, fine motor-adaptive, language, and personal-social. Each test item is represented on the scoring form by a bar showing at what ages 25%, 50%, 75% and 90% of typically developing children can perform that skill. The child is allowed up to three trials per item. A child's performance on each item is scored as "pass" or "fail "and then interpreted as representing "advanced, or "OK," caution," or "delayed" performance by comparing the child performance with those of the same age in the standardized population. Physicians are often involved in the development of the Denver II, and the test form was designed to fit the schedule of well-baby visits recommended by the American Academy of Pediatrics.

No one observes a child more often, closely, and with more interest than his parents. Mothers 'estimates of their preschool children's levels of development are often correlate highly with those that

professionals produced by using standardized scales, and parental involvement in screening has been found to reduce the numbers of misclassifications. Recognizing this fact, early childhood specialists have developed numerous screening tools parental involvement in screening has been reduced to the number of specialists who have developed numerous screening tools for parent use. One such tool is the Ages and Stages Questionnaires (ASQ-3). The ASQ includes 11 questionnaires that parents complete when the child is 4, 6, 8, 12, 16, 18, 20, 24, 30, 36, and 48 months old. Each questionnaire consists of 30 items covering 5 areas of development: gross motor, fine motor, communication, and personal-social and adaptive. Many of the items include illustrations to help the parents evaluate their child's behavior.

2.5.2 Child Behavior Checklist (CBCL)

The CBCL is one of several assessment tools included in the Achenbach System of Empirically Based Assessment, a widely used and researched collection of checklists and assessment devices. This school-age version comes in teacher report forms and can be used with children ages 6 through 18. The teacher's report form includes 112 behaviors (e.g., "sudden changes in mood or feelings," "not liked by other peoples"). That are rated on a 3-point scale: "not true," "somewhat or sometimes true," or "very true or often true". The CBCL also includes items representing social competencies and adaptive functioning such as getting along with others and acting happy.

2.5.3 Behavioral and Emotional Rating Scale (BERS)

The BERS assesses a student's strengths in 52 items across five areas of functioning: interpersonal strengths (e.g., reacts to disappointment in a calm manner); family involvement (e.g., participates in a family activities); intrapersonal strengths (demonstrates a sense of humor); school functioning (e.g., pays attention in class); and affective strengths (e.g., acknowledges painful feelings of others) (Epstein, 2004; as cited in Heward, 2012). Data from a strength-based assessment such as the BERS may be used to present positive attributes of students in IEP meetings, as an aid in writing IEP goals and objectives.

2.5.4 Systematic Screening for Behavioral Disorders (SSBD)

The SSBD employs a three-step multiple gating screening process for progressively narrowing down the number of children suspected of having serious behavior problems. In Gate 1, classroom teachers rank order every student in their classrooms according to behavioral profiles on two dimensions: externalizing problems and internalizing problems. The top three students on each teacher's list progress to Gate II, the Critical Events Index.

Critical events are behaviors of high salience and concern even if their frequency is low. Any occurrence of these targets behaviors is an indicator of major disruption of social-behavioral adjustment processes in school. The 33 items that make up the Critical Events Index include externalizing behaviors such as "is physically aggressive with other students" and "makes lewd or obscene gestures" and internalizing behaviors such as "vomits after eating" and "has auditory or visual hallucinations." Students who exceed normative criteria on the Critical Events Index advance to Gate III of the SSBD, which consists of direct and repeated observations during independent seat-work periods in the classroom and on the playground during recess. Children who meet or exceed cutoff criteria for either or both observational measures are referred to child study teams for further evaluation to determine their eligibility for special education.

Let Us Sum Up

All the children are unique in terms of behavior, strengths, weakness, expectations, aptitudes, needs etc. Some children face problems in the early stage, if not properly identified in time, the problems lead to the disorders. Children's developmental conditions, society, family and school are the factors to create problems in the children. Thus early identification also called screening is important in the early stage of lives of the children. There are many screening tools developed in the developed countries and some of these are screening tests are even used in Nepal. Screening process is basically two types; school-based screening and community-based screening. Community-based screening is considered a quick and efficient way of testing with high level of accuracy. It is a simple process and administered in the mass to find risk associated with individual child. A child is generally screened in his/her cognitive functioning, adaptive behavior, motor skills, positive attributes, and speech and language. Different screening tools are used to identify the problems existed in different areas of the body of the child.

Unit-end Activities

Group "A"

Objective questions:

Tick (√) the best answers

1. Which of the following statement is wrong for the statement "If children are inattentive and cannot concentrate in class, the possible reasons are:"
   a. They have problems in attention control.
   b. Recent family conflicts have upset them and affect their concentration in class.
   c. The curriculum may be too difficult for them such that they lose interest in class.
   d. **Children do not have interest in learning naturally.**

2. When the child have difficulty in counting, memorizing the things, confused between right and left and reads 'saw as was', then, the child might possess…….
   a. **learning disabilities**
   b. intellectual disability
   c. physical disability
   d. hearing disability

3. What is the purpose of designing developmental screening procedures?
   a. To know about the real child
   b. **To identify the problems or delays during normal childhood.**
   c. To solve the problems of developmental delays
   d. To find the academic level of the child

4. Which is not the function of School-based screening?
   a. Change the trajectory of problems before symptomatic behaviors become too entrenched
   b. Motivate parents to communicate with their child's primary care physicians
   c. Find out risk associated with the children
   d. **To refer the child for transition planning**

5. Intelligence tests provide at least one measure of ………..
   a. **general intellectual functioning**
   b. metacognitive ability
   c. social skills
   d. personal skills

6. Which is not the feature of adaptive skills?
   a. Adaptive skills are age related
   b. Modifiable

c. Defined by typical performance

d. Defined by educational achievement

7. The characteristics like active, ambitious, cheerful, cooperative, easy going, fast, forgiving, focused etc. of a child is said to be…….

   a. an ambitious child

   b. a hyperactive child

   c. a child with positive attributes

   d. a child with positive attitudes

8. Once a child is diagnosed with a speech-language disorder, he or she is typically referred for …

   a. surgery

   b. school

   c. placement

   d. therapy

9. How many behaviors are included in teacher's report form in Achenbach system of Empirically Bases Assessment (ASEBA) screening tool?

   a. 8 type of behaviors

   b. 65 type of behaviors

   c. 112 type of behaviors

   d. 100 type of behaviors

10. The Behavioral and Emotional Rating Scale (BERS) assess a strengths in……….

   a. 52 items across five areas of functioning

   b. 68 items across four areas of functioning

   c. 52 items across four areas of functioning

   d. 68 items across five areas of functioning

Group "B"

Short answer questions:

1. What are the causes of child's problems? Describe briefly.

2. What is the meaning of 'identification' in special education?

3. Explain how school-based screening is administered?

4. State and explain *global learning abilities*.

<center>**Group "C"**</center>

Long answer questions:

1. State the concept of identification and explain the importance of early identification.
2. Describe the types of screening for identifying children with special needs. How school-based screening differ from community-based screening process?
3. Describe any two major screening tools for children with special needs.

Points for Discussion

- Practice of identification of children with special needs in Nepal
- Implementation possibilities of school and community-based screening in Nepal
- Possibilities to use major screening tools in Nepalese classroom

Unit III: Assessing Children with Special Needs

3.1 Definition and Importance of Assessment of Children with Special Needs

Definition of assessment

Assessment consists of an assortment of techniques and procedures for evaluating, estimating, appraising, testing, and drawing conclusions about students (Venn, 2007). Broadly speaking, assessment is a process of making educational decisions for the children where the measures of their performance and behavior are used. Assessment of the students with special educational needs takes into account the unique needs of the children unlike other general assessment; different assessment process is used for each unique children.

In the assessment procedures and test systems are so designed that they could easily assess and evaluate the unique abilities of a special child. Assessment is a process of collecting data for the purpose of making decisions about students or schools. School personnel use assessment information to make decisions about what students have learned, what and where they should be taught, and the kinds of related services (for example, speech and language services, and psychological services) they need.

Moreover, throughout their professional careers, teachers, guidance counselors, school social workers, school psychologists, and school administrators are required to give, score, and interpret a wide variety of tests. Because professional school personnel routinely receive test information from their colleagues within the schools and from professionals outside the schools, they need a working knowledge of important aspects of testing. School personnel also use assessment information to make decisions about schools. School districts increasingly are being held accountable for the performance of their pupils. Parents, the general public, legislators, and bureaucrats want to know the extent to which students are profiting from their schooling experiences. Federal education policy contains specific expectations for states to develop high educational standards and to use tests to measure the extent to which students meet the standards. When we assess students, we measure their competence.

Specifically, we measure their progress toward attaining those competencies that their schools or parents want them to master. In schools, we are concerned about competence in three domains in which teachers provide interventions: academic, behavioral (including social), and physical. Historically, the focus of assessment has been on measuring student progress toward instructional goals and on diagnosing the need for special programs and related services. For example, we may want to know whether Shyam needs special education services to help him in developing his reading skills (need for service in an academic domain), whether Hari's behavior in class is sufficiently atypical to require special treatments or interventions (behavioral domain), or the extent to which Bikas is developing physically at a normal rate (measuring progress in the physical domain).

Hence, assessment refers to the gathering of relevant information to help an individual make decisions. The educational and psychological assessment of exceptional students, specifically, involves the collection of information that is relevant in making decisions regarding appropriate goals and objectives, teaching strategy and program placement. Assessment is a major focal point in education today. The term assessment approach describes the way information is collected for making an educational decisions (Cohen & Spenciner, 2007). Assessment includes many formal and informal methods of evaluating student progress and behavior. Clearly, gathering information about a student using a variety of techniques and information sources should shed considerable light on strengths and needs, the nature of a suspected disability and its effect on educational performance, and realistic and appropriate instructional goals and objectives.

Importance of assessment

Assessment touches everyone's life. It especially affects the lives of people who work with children and youth and who work in schools. As you begin your study of the assessment of students, consider the following ways in which assessment affects people's lives:

You learn that as part of the state certification process, you must take;

- Tests that assess your knowledge of teaching practices, learning, and child development. Mr. and Mrs. Johnson receive a call from their child's third-grade teacher,
- Who says he is concerned about Morgan's performance on a reading test. He would like to refer Morgan for further testing to determine whether Morgan has a learning disability. Mr. and

Mrs. Douglas tell you that their son is not eligible for Special Education services because he scored "too high" on an intelligence test. In response to publication of test results showing that U.S. students rank low.

- In comparison to students in other industrialized nations, the U.S. Secretary of Education issues a call for more rigorous educational standards for all students. The superintendent of schools in a large urban district learns that only 40 percent.

- Of the students in her school district passed the state graduation test. Your local school district asks for volunteers to serve on a task force to design

- A measure of technological literacy to use as a test with students.

Everyone thinks they are an expert on education, and assessment is one of the most hotly debated issues among not only educators but also the general public. People react strongly when test scores are used to make interpersonal comparisons in which they or those they love look inferior. We expect parents to react strongly when test scores are used to make decisions about their children's life opportunities—for example, whether or not their child could enter college, pass a class, be promoted to the next grade, receive special education, or be placed in a program for gifted and talented students. Unwanted outcomes often lead to questions about the kinds of tests used, the skills or behaviors they measure, and their technical adequacy. Probably no other activity that takes place in education brings with it so many challenges. Testing plays a critical role in schools and in society. Entire communities are keenly interested when test scores from their schools are reported and compared with scores from schools in other communities. Often, tests are used to make high-stakes decisions that may have a direct and significant effect on the continued funding of schools and school systems.

3.2 Assessing Student's Behavior through Observation

Teachers are constantly monitoring themselves and their students. Sometimes they are just keeping an eye on things to make sure that their classrooms are safe and goal oriented, to anticipate disruptive or dangerous situations, or just to keep track of how things are going in a general sense. Often, teachers notice behavior or situations that seem important and require their attention: The fire alarm has sounded, Harvey has a knife, Betty is asleep, Jo is wandering around the classroom, and so forth. In other situations, often as a result of their general monitoring, teachers look for very specific behavior to observe: social behavior that should be reinforced, attention to task, performance of particular skills, and so forth. Systematic observations are also used to inform placement and instructional decisions.

When assessment does not rely on permanent products (that is, written examinations and physical creations such as a table in shop or a dinner in home economics), observation is usually involved. Clearly, social behavior, l earning behavior (for example, attention to task), and aberrant behavior (for example, hand flapping) are all suitable targets of systematic observation.

 Obviously, behavior can be an integral part of assessing physical and mental states, physical characteristics, and educational handicaps as well as monitoring student progress and attainment. There are two basic approaches to observation: qualitative and quantitative. Qualitative observations can describe behavior as well as its contexts (that is, antecedents and consequences). These observations usually occur without predetermining the behaviors to be observed or the times and contexts in which to observe. Instead, an observer monitors the situation and memorializes the observations in a narrative, the most common form being anecdotal records. Good anecdotal records contain a complete description of the behavior and the context in which it occurred and can set the stage for more focused and precise quantitative observations. We stress behavioral observation, a quantitative approach to observation.

 Measuring behavior through observation is distinguished by five steps that occur in advance of the actual observations: (1) The behavior is defined precisely and objectively, (2) the characteristics of the behavior (for example, frequency) are specified, (3) procedures for recording are developed, (4) the times and places for observation are selected and specified, and (5) procedures are developed to assess inter-observer agreement. Beyond these defining characteristics, behavioral observations can vary on a number of dimensions.

3.2.1 Live or aided observation

Quantitative analysis of behavior can occur in real time or after the behavior has occurred by means of devices such as video or audio recorders that can replay, slow down, or speed up records of behavior. Observation can be enhanced with equipment (for example, a telescope), or it can occur with only the observer's unaided senses.

3.2.2 Obtrusive versus unobtrusive observation

Observations are called obtrusive when it is obvious to the person being observed that he or she is being observed. The presence of an observer makes observation obvious; for example, the presence

of a practicum supervisor in the back of the classroom makes it obvious to student teachers that they are being observed. The presence of observation equipment makes it obvious; for example, a video camera with a red light lit makes it obvious that observation is occurring.

Something added to a situation can signal that someone is observing. For example, a dark, late-model, four-door sedan idling on the side of the road with a radar gun protruding from the driver's window makes it obvious to approaching motorists that they are being observed, or a flickering light and noise coming from behind a mirror in a testing room indicate to test takers that there is someone or something watching from behind the mirror. When observations are unobtrusive, the people being observed do not realize they are being watched. Observers may pretend that they are not observing or observe from hidden positions. They may use telescopes to watch from afar. They may use hidden cameras and microphones.

Unobtrusive observations are preferable for two reasons. First, people are reluctant to engage in certain types of behavior if another person is looking. Thus, when antisocial, offensive, or illegal behaviors are targeted for assessment, observation should be conducted surreptitiously. Behavior of these types tends not to occur if they are overtly monitored. For example, Billy is unlikely to steal Bob's lunch money when the teacher is looking, and Rodney is unlikely to spray-paint gang graffiti on the front doors of the school when other students are present.

Likewise, if people are being observed, they are reluctant to engage in highly personal behaviors in which they must expose private body parts. In these instances, the observer should obtain the permission of the person or the person's guardian before conducting such observations. Moreover, a same-sex observer who does not know the person being observed (and whom the person being observed does not know) should conduct the observations.

The second reason that unobtrusive observations are preferable is that the presence of an observer alters the observation situation. Observation can change the behavior of those in the observation situation. For example, when a principal sits in the back of a probationary teacher's classroom to conduct an annual evaluation, both the teacher's and the students' behavior may be affected by the principal's presence. Students may be better behaved or respond more enthusiastically in the mistaken belief that the principal is there to watch them. The teacher may write on the chalkboard more frequently or give more positive reinforcement than usual in the belief that the principal values those

techniques. Observation can also eliminate other types of behavior. For example, retail stores may mount circuit TV cameras and video monitors in obvious places to let potential thieves know that they are being watched constantly and to try to discourage shoplifting.

When the target behavior is not antisocial, offensive, highly personal, or undesirable, obtrusive observation may be used provided the persons being observed have been desensitized to the observers and/or equipment. It is fortunate that most people quickly become accustomed to observers in their daily environment— especially if observers make themselves part of the surroundings by avoiding eye contact, not engaging in social interactions, remaining quiet and not moving around, and so on. Observation and recording can become part of the everyday classroom routine. In any event, obtrusive observation should not begin until the persons to be observed are desensitized and are acting in their usual ways.

3.2.3 Contrived versus naturalistic observation

Naturalistic observation is a research method commonly used by psychologists and other social scientists. This technique involves observing subjects in their natural environment. The observer plays no role in the behavior that is being measured, those being observed have no idea they are under observation. In contrived observation, research environment is created by the simulated situation. Researcher can control all aspects of the environment and data can be collected easier, quicker and cheaper.

Contrived observations occur when a situation is set up before a student is introduced into it. For example, a playroom may be set up with a courageous and aggressive play, such as guns or punching-bag dolls and other types of play materials. A child may be given a book and told to go into the room and read or may simply be told to wait in the room. Other adults or children in the situation may be confederates of the observer and may be instructed to behave in particular ways. For example, an older child may be told not to share the child who is the target of the observation, or an adult may be told to initiate a conversation on a specific topic with target child. In contrast, naturalistic observations occur in settings of natural environment, not contrived. For example, specific materials are not added to or removed from a playroom; the furniture is arranged in a manner as it always used to be arranged.

3.3 Process of Systematic Observation

3.3.1 Preparation

Careful preparation is essential to obtaining accurate and valid observational data that are useful in decision making. Five steps should guide the preparation for systematic observation:

1. *Define target behaviors*
   - Use definitions that describe behavior in observable terms.
   - Avoid references to internal processes (for example, understanding or Appreciating) *Instances and no instances of the behavior*
   - Include subtle instances of the target behavior, and use related behaviors and behavior with similar topographies as no instances.
   - State the characteristic of the behavior that will be measured (for example, frequency or latency).

2. *Select contexts*

   Observe the target behavior systematically in at least three contexts: the context in which the behavior was noted as troublesome (for example, in reading instruction), a similar context (for example, in math instruction), and a dissimilar context (for example, in physical education or recess).

3. *Select an observation schedule*

   Firstly, choose the session length. In the schools, session length is usually related to instructional periods or blocks of time within an instructional period (for example, 15 minutes in the middle of small-group reading instruction). Secondly, decide between continuous and discontinuous observation. The choice of continuous or discontinuous observation will depend on the resources available and the specific behaviors that are to be observed. When very low-frequency behavior or behavior that must be stopped (for example, physical assaults) is observed, continuous recording is convenient and efficient.

   For other behavior, discontinuous observation is usually preferred, and momentary time sampling is usually the easiest and most accurate for teachers and psychologists to use. When a discontinuous observation schedule is used, the observer requires some equipment to signal exactly when observation is to occur. The most common equipment is a portable audiocassette

player and a tape with pure tones, recorded at the desired intervals. One student or several students in sequence may be observed. For example, three students can be observed in a series of 5-second intervals. An audiotape would signal every 5 seconds. On the first signal, Henry would be observed; on the second signal, Joyce would be observed; on the third signal, Bruce would be observed; on the fourth signal, Henry would be observed again; and so forth.

4. *The recording of observations must also be planned*

When a few students are observed for the occurrence of relatively infrequent behaviors, simple procedures can be used. The behaviors can be observed continuously and counted using a tally sheet or a wrist counter. When time sampling is used, observations must be recorded for each time interval; thus, some type of recording form is required. In the simplest form, the recording sheet contains identifying information (for example, name of target student, name of observer, date and time of observation session, and observation-interval length) and two columns. The first column shows the time interval, and the second column contains space for the observer to indicate whether the behavior occurred during each interval. More complicated recording forms may be used for multiple behaviors and/or multiple students. When multiple behaviors are observed, they are often given code numbers. For example, "out of seat" might be coded as 1, "in seat but off task" might be coded as 2, "in seat and on task" might be coded as 3, and "no opportunity to observe" might be coded as 4.

Such codes should be included on the observation record form. The observer writes the code number(s) in the box corresponding to the interval. Complex observational systems tend to be less accurate than simple ones. Complexity increases as a function of the number of different behaviors that are assessed and the number of individuals who are observed. Moreover, both the proportion of target individuals to total individuals and the proportion of target behaviors observed to the number of target behaviors to be recorded also have an impact on accuracy. The surest way to reduce inaccuracies is to keep things relatively simple.

5. *Select the means of observation*

The choice of human observers or electronic recorders will depend on the availability of resources. If electronic recorders are available and can be used in the desired environments and contexts, they may be appropriate when continuous observation is warranted. If other personnel are available, they can be trained to observe and record the target behaviors accurately. Training should include didactic instruction in defining the target behavior, the use of time sampling (if it is

to be used), and the way in which to record behavior, as well as practice in using the observation system.

Training is always continued until the desired level of accuracy is reached. Observers' accuracy is evaluated by comparing each observer's responses with those of the others or with a criterion rating (usually a previously scored videotape). Generally, very high agreement is required before anyone can assume that observers are ready to conduct observations independently. Ultimately, the decision of how to collect the data should also be based on efficiency. For example, if it takes longer to desensitize students to an obtrusive video recorder than it takes to train observers, then human observers are preferred.

3.3.2 Collection of data

Observers should prepare a checklist of equipment and materials that will be used during the observation and assemble everything that is needed, including an extra supply of recording forms, spare pens or pencils, and something to write on (for example, a clipboard or tabletop). When electronic recording is used, equipment should be checked before every observation session to make sure it is in good working condition, and the observer should bring needed extras (for example, batteries, signal tapes, and recording tapes). Also, before the observation session, the observer should check the setting to locate appropriate vantage points for equipment or furniture. During observation, care should be taken to conduct the observations as planned. Thus, the observer should make sure that he or she adheres to the definitions of behavior, the observation schedules, and recording protocols. Careful preparation can head off trouble. As with any type of assessment information, two general sources of error can reduce the accuracy of observation. Random error can result in over- or underestimates of behavior. Systematic error can bias the data in a consistent direction—for example, behavior may be systematically over counted or undercounted.

3.3.3 Analysis and summarization of data

Depending on the particular characteristic of behavior being measured, observational data may be summarized in different ways. When duration or frequency is the characteristic of interest, observations are usually summarized as rates (that is, the prevalence or the number of occurrences per minute or other time interval). Latency and amplitude should be summarized statistically by the

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mean and the standard deviation or by the median and the range. All counts and calculations should be checked for accuracy.

The key factors in achieving real value from all the work is to make the most out of the information collected by using effective analysis and interpretation practices.

The best ways to analyze and interpret assessment information

- Present the data in relation to the program's identified goals and objectives
- Use qualitative and quantitative methods to present a well-balanced picture of the assessment goals and driving questions
- Vary your analysis and reporting procedures according to identified audiences (accreditors, campus report etc.)
- Develop recommendations based on the analysis of data and using identified goals as a framework within which to accomplish suggested changes

Consider the extent to which findings can help answer the following questions:

- What does the data say about students' mastery of subject matter, research skills, or writing?
- What does it say about meeting benchmark expectations?
- What does the data say about students' preparation for taking the next step in their careers?
- Are graduates getting good jobs, accepted into reputable graduate schools?
- Are there areas where students are outstanding?
- Do you see weakness in any particular skills, such as research or critical thinking skills?

These are compelling questions for faculty, administrators, students, and external audiences alike. If assessment information can shed light on these issues, the value of efforts will become all the more apparent.

Remember that data can often be misleading, and even threatening, when used for purposes other than originally intended and agreed upon. For example, data collected from the assessment of student performance in a capstone course should be used to identify areas of strengths and weaknesses in student learning "across the students' entire experience in the major". In this way, the data can guide

curricular modifications and departmental pedagogical strategies. The data should not be used to evaluate the performance of the capstone course instructor.

3.4 Use of Assessment Results

Literally, each regular and special education teacher makes hundreds of professional decisions every day. Some decisions affect classroom management; others affect instructional management. Some types of decisions occur infrequently; others occur several times each day. A General educators are largely responsible for identifying students with sufficiently severe learning or behavior problems to be referred for special education services. General and special educators share responsibility for the education of students with disabilities who are included in general education classrooms. Special educators are responsible for students whose disabilities are so severe that they cannot be educated in general education settings even with a full complement of related services and classroom adaptations and accommodations. Assessment is the process of collecting data for the purpose of making decisions about students. Assessment results in the form of quantitative and qualitative information is finally used to take decisions in various areas like academic enhancement, health risk, referral, placement etc.

3.4.1 Decisions prior to referral

The overwhelming majority of children enter school under the presumption that they do not have disabilities, and most complete their schooling under the same presumption. Approximately 40 percent of all students will experience difficulty during their school career. Here, we deal with those decisions that precede entitlement to special education. Before referring students for possible identification as exceptional, general educators take several steps, some of which are mandated by federal and state regulations. The first step is to recognize that a problem exists; the remaining steps may vary in sequence, depending on the state or district.

Decision: are there unrecognized problems?

Federal regulations require that all states have policies and procedures to ensure all children with disabilities who need special education and related services are identified, located, and evaluated. This requirement is generally referred to as child find. In practice, this means that local school districts and other agencies inform parents of available services through strategically placed flyers, notices in

local newspapers, and so forth. Children with moderate or severe disabilities are usually recognized before the age of 3 or 4 years and identified as disabled upon enrolling in school. However, some children have undiagnosed sensory difficulties that may not have been readily apparent to parents, physicians, or teachers. Therefore, schools routinely screen all children to identify these hidden or unrecognized hearing and vision problems as a first step in providing services for them. Sensory screening is usually conducted by a school nurse with the intention of finding children who require diagnosis by a health care professional—a hearing specialist such as an audiologist or a vision specialist such as an optometrist or ophthalmologist. The critical point is that screening, by itself, cannot be used to identify a student as disabled. There must be follow-up.

Decision: Is the student making adequate progress in regular education? General educators may recognize that some students are not making adequate progress toward individual, classroom, or state goals. These students may require additional assistance to help them achieve the desired educational outcomes. The threshold of recognition varies from teacher to teacher and may be a function of several factors: teacher skill and experience, class size, availability of alternative materials and curriculum, ability and behavior of other students in the class, and the teacher's tolerance for atypical progress or behavior. Generally, when a student is performing at a rate that is between 20 and 50 percent of the rate of other students, a teacher has reason to be concerned.

Academic needs

The following might signal that students are having academic difficulty:
- Students ask questions that indicate that they do not understand new material.
- Students do not know material that was previously taught and presumed to be mastered.
- Students make numerous errors and few correct responses.
- Students do not keep up with peers, in general or in their instructional groups.
- Students' work is so far behind that of their peers that they cannot be maintained in the lowest instructional group in a class—that is, the students become instructionally isolated.
- Student work deteriorates from good or acceptable to poor or unacceptable.
- Students perform adequately in most academic areas but have extreme difficulty in one or more important core skill areas.

Why a student is having difficulty is seldom clear at this point in the decision making process. There are multiple reasons for school failure, and these reasons may often interact with one another. The

reasons for these differences generally fall into two broad categories: ineffective instruction or individual differences. Some students make progress under almost any instructional conditions. When students with emerging skills and a wealth of information enter a learning situation, such students merely need the opportunity to continue learning and developing skills. These students often learn despite ineffective instructional methodology. However, some students enter a learning situation with poorly developed skills and require much more effective instruction. Without good instruction, these students are in danger of becoming casualties of the educational system. This situation can occur in at least five ways.

- *Students' lack of prerequisite knowledge or skill.* Some students may lack the prerequisites for learning specific content. In such cases, the content to be learned may be too difficult because the student must learn the prerequisites and the new content simultaneously. For example, Mr. Santos may give Alex a reader in which he knows only 70 percent of the words. Alex will be forced to learn sight vocabulary that he lacks while trying to comprehend what he is reading. The chances are that he will not comprehend the material because he must read too many unknown words.

- *Insufficient instructional time*. The school curriculum may be so cluttered with special events and extras that sufficient time cannot be devoted to core content areas. Students who need more extensive and intensive instruction in order to learn may suffer from the discrepancy between the amounts of instruction (or time) they need and the time allocated to teaching them.

- *Teachers' lack of subject matter knowledge*. The teacher may lack the skills to teach specific subject matter. For example, in some rural areas, it may not be possible to attract physics teachers, so the biology teacher may have to teach the physics course and try to stay one or two lectures ahead of the students.

- *Teachers' lack of pedagogical knowledge.* A teacher may lack sufficient pedagogical knowledge to teach students who are not independent learners. Although educators have known for a very long time about teaching methods that promote student learning. This information is not as widely known to teachers and supervisors as one would hope. Thus, some educators may not know how to present new material, structure learning opportunities, provide opportunities for guided and independent practice, or give effective feedback. Also, given the number of families in which all adults work, there is less opportunity for parents to provide supplementary instruction at home to overcome ineffective instruction at school.

- *Teachers' commitment to ineffective methods*. A teacher may be committed to ineffective instructional methods. A considerable amount of effort has gone into the empirical evaluation of various instructional approaches. Yet much of this research fails to find its way into the classroom. For example, a number of school districts have rejected systematic instruction in phonics.

However, the empirical research is more than clear that early and systematic phonics instruction leads to better reading. Before investing in expensive and extensive assessment of the student, it is almost always preferable to examine the effectiveness of the curriculum and the instruction. If students begin to make better progress with more effective instructional procedures, there is no need to refer them. A few students make little progress despite systematic application of sound instructional principles that have been shown to be generally effective. There are at least three reasons for this.

Student ability may affect instruction. Obviously, instruction that relies heavily on visual or auditory presentation will be less effective with students who have severe visual or auditory impairments.

- Just as obviously, slow learners require more practice to acquire various skills and knowledge.
- Some students may find a particular subject inherently interesting and be motivated to learn, whereas other students may find the content to be boring and require additional incentives to learn.
- Cultural differences can affect academic learning and behavior. For example, reading is an interactive process in which an author's writing is interpreted on the basis of a reader's experience and knowledge. To the extent that students from different cultures have different experiences, their comprehension of some written materials may differ. Thus, students from different cultural groups may have different understandings of, for example, "all men are created equal." Similarly, cultural norms for instructional dialogues between teacher and student may also vary, especially when the teacher and student are of different genders. Boys and girls may be raised differently, with different expectations, in some cultures. Thus, it may be culturally appropriate for women and girls to be reticent in their responses to male teachers. Similarly, teachers may feel ill equipped to teach students from different cultures. For example, teachers may be hesitant to discipline students from another culture, or they may not have culturally relevant examples to illustrate concepts and ideas.

3.4.2 Eligibility for special needs education

To be eligible for special education and related services, a child must have a disability and need specially designed instruction. IDEA requires that all children suspected of having a disability receives a nondiscriminatory multi-factored evaluation (MFE). Either the school or the parents can request that a child be evaluated for special education. Regardless of the source of the referral, the parents must be notified of the school's intent to test their child, and they must give their consent to the evaluation. Within 60 days of receiving parental consent for evaluation, the school district must complete the evaluation to determine whether the child has a disability and identify the educational needs of the child.

IDEA is explicit in describing some do's and don'ts that school districts must follow when evaluating a child for special education.

In conducting the evaluation, the local educational agency shall-

   a. Use a variety of assessment tools and strategies to gather relevant functional, developmental and academic information, including information provided by the parent, that may assist determining-

Whether the child is a child with a disability; and

The content of the child's individualized education program, including information related to enabling the child to be involved in and progress in the general education, or, for preschool children, to participate in appropriate activities.

   b. Not use any single measure or assessment as the sole criteria for determining whether a child is a child with a disability or determining an appropriate educational program for the child; and

   c. Use technically sound instruments that may assess the relative contribution of cognitive and behavioral factors, in addition to physical developmental factors.

Additional Requirements-Each local educational agency shall ensure that

   a. Assessments and other evaluation materials used to asses a child –

   • are selected and administered so as not be discriminatory on a racial or cultural basis;

   • are provided and administered in the language and form most likely to yield accurate information what the child knows and can do academically, developmentally, and functionally unless it is not feasible to so provide or administer;

   • are used for purposes for which the assessments or measure are valid and reliable;

- are administered by trained and knowledgeable personnel; and are administered in accordance with any instructions provided by the producer of such assessments.

b. The child is assessed in all areas of suspected disability;

c. Assessment tools and strategies that provide relevant information that directly assists person in determining the educational needs of the child are provided; and

d. Assessment of children with disabilities who transfer from one school district to another school districts in the same academic year are coordinated with such children's prior and subsequent schools, as necessary and as expeditiously as possible, to ensure prompt completion of full evaluations.

The eligibility of a child for special education and related services is considered when a child has arrived at the Tier 3 level of RTI (Response to Intervention). When a child has been in Tier 2 for a pre-determined amount of time and an evaluation is given, then a meeting is called to determine eligibility for special education services. Who makes the decision about whether a child is eligible for special education and related services?

The parent of the child and a team of qualified professionals must determine whether the child is a child with a disability and in need of special education and related services. The determination of whether a child suspected of having a specific learning disability is a child with a disability, must be made by the child's parents and a team of qualified professionals which must include the child's regular teacher; or a regular classroom teacher qualified to teach a child of his or her age if the child does not have a regular teacher; or, for a child of less than school age, an individual qualified by the SEA to teach a child of his or her age; and at least one person qualified to conduct individual diagnostic examinations of children, such as a school psychologist, speech-language pathologist, or remedial reading teacher.

In interpreting evaluation data for the purpose of determining if a child is a child with a disability and in need of special education, each public agency is to draw upon information from a variety of sources, including aptitude and achievement tests (but not restricted to these results), parent input, teacher recommendations, physical condition, social or cultural background, and adaptive behavior.

IDEA includes the following additional procedures when evaluating and determining the existence of a specific learning disability:

1. A team may determine that a child has a specific learning disability if:

    - The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed below, if provided with learning experiences appropriate for the child's age and ability levels; and

    - The child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas: Oral expression; listening comprehension; written expression; basic reading skill; reading comprehension; mathematics calculation; mathematics reasoning, and/or a presented portfolio, and/or teacher reports on daily work which shows academic performance is not in an acceptable range and the learning processing disability can be seen or it was stated.

2. The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of:

    - A visual, hearing, or motor impairment
    - Mental retardation
    - Emotional disturbance; or
    - Environmental, cultural or economic disadvantage.

3. Observation:

    - At least one team member other than the child's regular teacher shall observe the child's academic performance in the regular classroom setting.

    - In the case of a child of less than school age or out of school, a team member shall observe the child in an environment appropriate for a child of that age.

4. Written report for a child suspected of having a specific learning disability, the documentation of the team's determination of eligibility must include a statement of:

    - Whether the child has a specific learning disability.
    - The basis for making the determination.
    - The relevant behavior noted during the observation of the child.
    - The relationship of that behavior to the child's academic functioning.
    - The educationally relevant medical findings, if any.
    - Whether there is a severe discrepancy between achievement and ability that is not correctable without special education and related services.
    - The determination of the team concerning the effects of environmental, cultural, or economic disadvantage.

Each team member shall certify in writing whether the report reflects his or her conclusion. If it does not reflect his or her conclusion, the team member must submit a separate statement presenting his or her conclusions.

3.4.3 Communicating assessment information through written records to various agencies

Parents and guardians are often the members of teams who have the least knowledge and skill in understanding assessment. Given the influential role that they play in the lives of their children, it is important for them to be equipped with knowledge to assist with interpreting assessment results. Parents need to be empowered to be active and helpful members of school decision-making teams. A variety of things can limit parent understanding of assessment information and participation in team decision making. Language barriers can clearly hinder effective communication. Many parents may not have a schedule that permits participation in meetings as scheduled by school professionals. They may feel intimidated by various school professionals. They may not recognize the important knowledge that they can bring to the team or not understand how to effectively communicate that knowledge to the team. They may have strong emotional reactions to data that are presented about their child's academic successes and failures, which may hinder rational decision making. They may have strong feelings and opinions about the quality of educational services provided to their child and about how their child's needs might best be met by educational professionals. Unfortunately, parents' unique knowledge about their child is often disregarded or ignored by school professionals, who often make decisions prior to team meetings. Schools can take several steps to make communication with parents more effective. Better communication should result in more effective parental participation in associated team decision making.

a. Communicate with parents frequently: Often, parents are not made aware of difficulties that their child is having until the child is being considered for special education evaluation. When this happens, it can lead to strong emotional reactions and frustration among parents. It can also lead to unnecessary conflict if parents do not think that special education services would be in the best interest of their child. It is important that parents are provided frequent and accurate information on the progress of their child from the very beginning of their child's enrollment in school. By providing this information, parents of those students who are consistently low performing may become more involved in helping to develop intervention plans that may reduce their child's difficulties. Furthermore, when parents receive

frequent communication about their child's progress (or lack thereof), they may more readily understand why a referral for special education eligibility evaluation is made.

b. Communicate both the child's strengths and the child's weaknesses: Parents of students with special needs are often reminded of their child's weaknesses and difficulties in school and may rarely be alerted to their child's successes and strengths. Other parents may overvalue their child's relative strengths and ignore or minimize their child's weaknesses. In order to work effectively with parents, and to facilitate creative problem solving as a part of a team, it is important to recognize and communicate about a child's specific strengths as well as weaknesses.

c. Translate assessment information and team communications as needed: Assessment data that are reported to all parents (for example, statewide assessment results and screening results) should be made available in the parent's primary language or mode of communication. To facilitate participation in team meetings, interpreters should be provided. In order to interpret well, they may need special training in how to communicate the pertinent information to parents, as well as how to ensure that parents' questions, concerns, and contributions have a voice within team meanings.

d. Be aware of how cultural differences may impact the understanding of assessment information: It is also suggested that when cultural differences exist, a person who understands both the student's culture and educational matters be present. This may be necessary even when language differences are nonexistent (for example, the student is Amish and the culture of the school is not Amish). This can help a team identify issues that may be cultural in nature. Schedule meetings to facilitate parent attendance.

e. Efforts should be made to schedule meetings at a time when parents can be present: Challenges associated with transportation should be addressed. In certain circumstances, it may be necessary for school professionals to meet at a location that is more convenient for parents than the school setting. It may also be necessary for school personnel to communicate directly with an employer, encouraging the employer to allow the parent to be excused from work. This is especially true in communities in which one company (for example, a paper mill, an automobile factory, or a meat packing plant) is the employer of many parents. In this case, a blanket arrangement could be made in which the company agrees to release the parent for school meetings if a request is made by the school.

f. Clearly explain the purpose of any assessment activities, as well as the potential outcomes: Whereas school professionals may be very familiar with assessment related processes and procedures, and associated decisions that are made, parents often are new to the process. It is important to prepare them for what to expect as it relates to using the results of assessment data that are collected. Sometimes, it can be helpful for school professionals to contact parents before a meeting to explain the purpose of the meeting and what they can expect to happen at the meeting. Parents should be informed of all potential outcomes of a particular meeting (for example, development of an intervention plan, decision to collect more data, and decision that the student is eligible to receive special education services) so that they are not caught off guard.

g. Communicate using nontechnical language as much as possible: By now, you have most certainly recognized that language used in educational circles is full of acronyms. It is important for these, as well as all of the other technical terms that may be used, to be fully explained to parents so that they can be in dialog with team members. Whereas some parents may understand technical terms associated with assessment data, others may not. It is more appropriate to err on the side of using language that is easier to understand than to assume that parents understand terminology that is used by school professionals.

h. Maintain a solution-focused orientation and avoid pointing blame: Just about every school team meeting is intended to promote student achievement, whether directly or indirectly. Making this goal happen requires that individual team members focus on alterable rather than unalterable variables and on what can be changed in the future to promote student learning rather than dwelling on what has happened in the past. Unfortunately, there can be a tendency to focus on what people may have done or failed to do in the past rather than making plans for the future. Although it is important to learn from past mistakes, team members should focus on what can be done in the future to improve student learning. Focusing on past failure can decrease morale and contribute to unnecessary conflict among team members.

Through Written Records

Although presentation of assessment information and related decision making is frequently done verbally and in team meetings, assessment data are also collected, summarized, and interpreted in written form. Policies and standards for the collection, maintenance, and dissemination of information

in written formats must balance two sometimes conflicting needs. Parents and children have a basic right to privacy; schools need to collect and use information about children (and sometimes parents) in order to plan appropriate educational programs. Schools and parents have a common goal:

To promote the welfare of children: In theory, schools and parents should agree on what constitutes and promotes a child's welfare, and in practice, schools and parents generally do work cooperatively. In 1974, many of these recommended guidelines became federal law when the Family Educational Rights and Privacy Act (Public Law commonly called FERPA) was enacted. The basic provisions of the act are quite simple. All educational agencies that accept federal money (preschools, elementary and secondary schools, community colleges, and colleges and universities) must grant parents the opportunity to inspect and challenge student records.

Regardless of whether the school decides to change the records according to parent input, parents have the right to supplement the records with what they understand to be true or an explanation as to why they believe the file to be inaccurate. The only records to which parental access may be denied are the personal notes of teachers, supervisors, administrators, and other educational personnel that are kept in the sole possession of the maker of the records. Also, educational agencies must not release identifiable data without the parents' written consent. However, at age 18 years, the student becomes the individual who has the authority to provide consent for his or her data to be released to others. Violators of the provisions of FERPA are subject to sanctions; federal funds may be withheld from agencies found to be in violation of the law. The following section discusses specific issues and principles in the collection, maintenance, and dissemination of pupil information through written records and reports.

Dissemination of Pupil Information Educators need to consider both access to information by officials and dissemination of information to individuals and agencies outside the school. In both cases, the guiding principles are (1) the protection of pupils' and parents' rights to privacy and (2) the legitimate need to know particular information, as demonstrated by the person or agency to whom the information is disseminated.

Access within the schools: Those desiring access to pupil records must sign a form stating why they need to inspect the records. A list of people who have had access to their child's files and the reasons that access was sought should be available to parents. The provisions of FERPA as well as IDEA state

that all persons, agencies, or organizations desiring access to the records of a student shall be required to sign a written form that shall be kept permanently with the file of the student, but only for inspection by the parents or student, indicating specifically the legitimate educational or other interest that each person, agency, or organization has in seeking this information. When a pupil transfers from one school district to another, that pupil's records are also transferred. FERPA is very specific with regard to the conditions of transfer. When a pupil's file is transferred to another school or school system in which the pupil plans to enroll, the school must (1) notify the pupil's parents that the records have been transferred, (2) send the parents a copy of the transferred records if the parents so desire, and (3) provide the parents with an opportunity to challenge the content of the transferred data.

Access for individuals and agencies: Outside the Schools, school personnel collect information about pupils enrolled in the school system for educationally relevant purposes. There is an implicit agreement between the schools and the parents that the only justification for collecting and keeping any pupil data is educational relevance. However, because the schools have so much information about pupils, they are often asked for pupil data by potential employers, credit agencies, insurance companies, police, the armed services, the courts, and various social agencies. To divulge information to any of these sources is a violation of this implicit trust unless the pupil (if older than 18 years) or the parents request that the information be released.

Note that the courts and various administrative agencies have the power to subpoena pupil records from schools. In such cases, FERPA requires that the parents be notified that the records will be turned over in compliance with the subpoena. Except in the case of the subpoena of records or the transfer of records to another school district, no school personnel should release any pupil information without the written consent of the parents. FERPA states that no educational agency may release pupil information unless "there is written consent from the student's parents specifying records to be released, the reasons for such release, and to whom, and with a copy of the records to be released to the student's parents and the student if desired by the parents."

3.4.4 Planning of special needs education

IEP has become the central document devoted to specifying the nature of special education services for students with special needs since 1975. Additionally, other key documents specify the nature of services that a school district can provide to a student.

Individualized Education Plan (IEP)

The actual content of an IEP is very clearly spelled out in the law. Although different school districts may use different formats when creating an IEP, the minimum content cannot vary. The initial IEP and all subsequent IEPs must include the following:

1. *A statement of the child's present level of educational achievement and functional performances is mentioned in the IEP*. The IEP must contain information about the student's educational skills and how they affect his or her performance in the general curriculum.

2. *A statement of measurable annual goals and, for students evaluated through alternate assessment, benchmarks or short-term objectives*. These goals must be related to meeting the child's needs that result from his or her disability in order to enable the child to be involved and progress in the general curriculum, or for preschool child, to participate in appropriate activities. The goals must also address each of the child's other educational needs that result from his or her disability.

3. *A statement of the special education and related services and supplementary aids and services to be provided to the child.* This part of the IEP must include a statement of the program modifications or supports for school personnel that will be provided for the child so that he or she can advance appropriately toward attaining annual goals, participate and progress in the general curriculum and participate in extracurricular and other non-academic activities with children with or without special needs.

4. *An explanation of the extent, if any, to which the child will not participate with non-disabled children in the general education classroom and in other school activities*. The assumption is that a child with a disability will be included in the general education classroom, participate in the general curriculum, and in other ways be involved in school activities.

5. *A statement about the child's participation in state or district-wide assessments of student's achievement*. It means that there must be a modifications in the administration of state or district wide assessments that are needed in order for the child to participate in the assessment.

6. *The projected dates for beginning services and modifications.* These dates refer to services described in item 3 and their anticipated frequency, location, and duration.

7. *A statement of how the child progress toward the annual goals described in item 2 will be measured and how the child's parents will be regularly informed.* Parents of children of special needs must be informed of their children's progress at least as often as other parents are informed of their children's progress. The progress reports must tell parents about a child's

progress toward his or her annual goals and the extent to which that progress is sufficient to enable the child to achieve the goals by the end of the year.

Transition services statement

For students who are adolescents and approaching adulthood the law the law says the IEP must include a statement of transition services. According to IDEA 2004, transition services means a "coordinated set of activities" that-

- Is "result-oriented" in that it focuses on "improving the academic and functional achievement" of a student and facilitates "movement from school to the post-school activities.
- May include post-secondary education, vocational education, integrated employment, continuing, adult education, adult services, independent living, or community participation.
- Is based on individual needs that consider the student's strengths, preferences, and interests.
- Includes instruction, related services, community experiences, the development of employment and other post-school adult living skills and functional vocational evaluation.

Transition services for each student with a disability must begin at 16. These services are indicated in the IEP by a statement of measurable postsecondary goals. The goals must be based on assessments that can report the student's skills in areas of training, education, employment, and, when appropriate, independent living skills. To help the students reach the goals, the IEP must include a statement of transition services, including course of study and a statement of the interagency responsibilities or any needed links.

Parent participation in planning

Parents have right to approve the initial evaluation of their child and attend the meeting where eligibility will be determined and an initial IEP developed. They also have their right to express their opinion about the placement of their child as a special education student and about all other components of the IEP. Schools are required to do all that is possible to facilitate parent's attendance and participation in meetings. Provide an interpreter service if the parents speak foreign language or deaf. After the IEP has been written and signed by members of the IEP team, school officials must give the parents a copy. The IEP should seek the consent of parents when taking decisions of placement about their child.

Placement in special education

Once the IEP has been completed and signed, an eligible student may begin to receive services. The most significant ingredients of the IEP will be the goals the student will work on and the type of placement where the student is served. Because a high priority is placed on the child's participation in the general curriculum and education with students without special needs, the require that the student be placed in the least restrictive environment (LRE) in which his or her unique needs can be effectively served. The LRE for any children is the placement on the continuum of services that is as close as possible to the general education classroom.

Reevaluations and updating the IEP

Neither the student's placement in special education nor the student's special education goals are static. So after the student is placed and begins to receive services and supports, subsequent reevaluations for eligibility and meetings for updating the IEP may be necessary. According to IDEA 2004, school districts should conduct reevaluations if the student's academic or functional progress seems to have been sufficient to warrant a reevaluation or if the parents or a teacher request a reevaluation. However, schools are not required to conduct reevaluations more than once a year unless the school district and the parent both agree that it is necessary. On the other hand, school must conduct reevaluations at least every 3 years unless the districts and the parents agree that it is not necessary to do so to establish the eligibility of the student.

3.5 Concept and Importance of Referral Process

Concept of referral services

A child who may need special education usually comes to the school's attention because (a) a teacher or parent reports concern about differences in learning behavior, or development or (b) the results of a screening test suggest a possible disability. Screening tests are relatively quick, inexpensive, and easy to administer the assessment given to large groups of children to find out who might have a disability and need further testing. For example, most school administer vision screening test to all elementary children.

Before referring the child for formal testing and evaluation for special education, most schools initiate a pre-referral intervention process. Although IDEA does not require pre-referral intervention, local educational agencies may use up to 15% of their IDEA funds to develop and implement coordinated, early intervening services. If your child is between the ages of three- to five-years-old, and you suspect

he needs special education services, your first step will be to contact your school district and request an evaluation. When you request that your child be evaluated for special education this is called a **referral.** The process of obtaining special education services for your child can seem complicated and confusing. Every parent feels a little overwhelmed.

It is difficult to say exactly how successful pre-referral or early intervening programs are, but we do not know that many children who might be considered as candidates for special education can be successfully maintained in the general education classroom through effective intervention. On the other hand, if the child's problems are too challenging, if the general education classroom intervention is not effective, or if there is no pre-referral intervention, sooner or later a decision will be made to refer the child so that he or she can be evaluated for special education services. When this occurs, school districts must follow procedural guidelines required in IDEA 2004. Notwithstanding pre-referral or early intervening actions, the formal path for a school age children into special education usually begins when the classroom teacher or another school employee submits an official referral for evaluation. Through it, the teacher ask that the child be evaluated to determine eligibility for special education. Parents or other interested persons may also submit such a request to the school.

Usually the referral is sent to a designated individual in the school such as the school counselor or an assistant principal, and this person then forwards the referral to the central district administrative office. A placement specialist at the administrative office will usually arrange a schedule for conducting the necessary evaluations.

If parents have not been involved in a pre-referral or early intervening process or have not yet been notified that their child is having difficulty, federal law requires that they be notified when a referral is submitted, except under the following circumstances:

- Despite reasonable efforts to do so, the agency cannot discover the whereabouts of the parent of the child
- The rights of the parents of the child have been terminated in in accordance with state law
- The rights of the parent to make educational decisions have been subrogated by a judge in accordance with state law, and consent for initial evaluation has been given by an individual appointed by judge to represent the child.

Importance of referral

In health system, a referral can be defined as a process in which a health worker at a one level of the health system, having insufficient resources (drugs, equipment, skills) to manage a clinical condition, seeks the assistance of a better or differently resourced facility at the same or higher level to assist in, or take over the management of the client's case. Key reasons for deciding to refer either an emergency or routine case include:

- to seek expert opinion regarding the case
- to seek additional or different services for the case
- to seek admission and management of the case
- to seek use of diagnostic and therapeutic tools

Therefore, the 'referral' means to refer someone to somebody, something, or some services for one's betterment. It is usually done by lesser expert person to service receiver to expert person. In special education, referral is done to the students who need special evaluation. Another purpose of the referral services is to link people with needed services by identifying their needs, finding the most appropriate services, and linking them to the most appropriate service providers. Referral system also helps to understand people's situation, prioritize and plan, and also identify and understand community resources.

Let Us Sum Up

Assessment consists of an assortment of techniques and procedures for evaluating, estimating, appraising, testing, and drawing conclusions about students. The main goal is to adapt the process to fit individual needs of the child rather than to fit the child in assessment process. Students' behavior are also assessed through observation. Observations are live or aided and obtrusive versus unobtrusive observation. Observations are also contrived and naturalistic. In systematic observation, it consists of three essential steps viz. preparation, collection of data and analysis and summarization of data. Assessment results are used to take decisions in various areas like academic, enhancement, health risk, referral and placement. Assessment data are also used to determine eligibility of students with special needs. The assessment results are communicated to the parents and other agencies through written records. The final procedure is referral and a referral can be defined as a process in which a health worker at a one level of the health system, having insufficient resources (drugs, equipment, skills) to manage a clinical condition, seeks the assistance of a better or differently resourced facility at the same or higher level to assist in, or take over the management of the client's case.

Unit-end Activities

<div align="center">

Group "A"

</div>

Objective questions:

<div align="center">

Tick (√) the best answers

</div>

1. Educational assessment and interventions for the students with special needs are done considering that …..
   a. each child is vulnerable
   b. each and every child deserves assessment and intervention
   c. each child has unique needs
   d. each child has right to education

2. When it is obvious to the person being observed that he or she is being observed, this method of assessing behavior is called………
   a. Live observation
   b. Obtrusive observation
   c. Contrived observation
   d. Naturalistic observation

3. School personnel use assessment information to make decisions about….
   a. his/her learning, and related services
   b. increasing student's role in the society
   c. increasing their mobility
   d. making the students happy and loving

4. In contrived observation………
   a. observing subjects in their natural environment
   b. student is placed before many experts and behavior is observed
   c. a situation is set up before a student is introduced into it
   d. student is placed in their home among their family but no settings are changed

5. The eligibility of a child for special education and related services is considered when a child has arrived at the….

a. Individual Family Service Plan (IFSP)

b. Tier I level of RTI

c. Tier II level of RTI

d. Tier III level of RTI

6. The members of the IEP teams who have possibly the least knowledge and skill in understanding assessment is…….

a. teachers

b. parents

c. special educators

d. doctors

7. Individualized Education Plan (IEP) has become the central document in the field of special education since…….

a. 1975

b. 1985

c. 1995

d. 2005

8. Testing process which are relatively quick, inexpensive and easy to administer are called…….

a. identification

b. screening

c. diagnosis

d. referral

9. Which is not the importance of referral?

a. to seek additional or different services for the case

b. to seek admission and management of the case

c. to seek use of diagnostic and therapeutic tools

d. to seek the instructional strategies required by the student

10. According to IDEA 2004, which is not the objective providing of transition services?

a. Coordinated set of activities

b. It is result oriented and focuses on improving academic and functional achievement

c. Include post-secondary education, vocational education, adult education etc.

d. Service provided for the adult people who don't have any skills

<h2 align="center">Group "B"</h2>

Short answer questions:

1. Define educational assessment and its importance.
2. Differentiate between obtrusive and unobtrusive observation.
3. What are the steps to guide the preparation for systematic observation? Explain briefly.
4. How eligibility for special needs education is determined? Explain briefly.
5. What do you understand by "communicating assessment information"

<h2 align="center">Group "C"</h2>

Long answer questions:

1. Explain the observation method of assessing student's behavior.
2. State and explain the process of systematic observation.
3. What are the situations because of which the students are in danger of becoming casualties of the educational system?

Points of Discussion

- Assessing students with special needs education in Nepal
- Type of decisions prior to referral
- How to determine eligibility for special education in Nepal
- Increasing parental involvement in special education process in Nepal

Unit IV: Intervention Strategies for the Children with Special Needs

4.1 Concept and Importance of Intervention

Concept of intervention

An intervention is a combination of program elements or strategies designed to produce behavior changes or improve health status among individuals or an entire population. Interventions may include educational programs, new or stronger policies, improvements in the environment, or a health promotion campaign. Interventions that include multiple strategies are typically the most effective in producing desired and lasting change.

Interventions may be implemented in different *settings* including communities, worksites, schools, health care organizations, faith-based organizations or in the home. Interventions implemented in multiple settings and using multiple strategies may be the most effective because of the potential to reach a larger number of people in a variety of ways.

Evidence has shown that interventions create change by:

- influencing individuals' knowledge, attitudes, beliefs and skills;
- increasing social support; and
- Creating supportive environments, policies and resources.

Intervention may be related to education, health, behavior change or teaching social skills to the children with special needs. When the learning of the child is diagnosed as a problem and is felt that the child needs extra support for learning, the instructional intervention strategy is made. Similarly, in the case of health problems, medical intervention (treatment plan/strategy) is required. Likewise, when the child display disruptive or antisocial behavior, a management of the behavior is required. For this, behavior medication or positive behavior support is required. These are also the intervention for behavioral change.

Intervention is given as soon as possible when it is realized that a child needs immediate support to settle his/her difficulties. When the intervention is provided on the early stage of life, this is called early intervention. Similarly, when intervention is provided in later stage of life after realization of the need of support, it is called intervention.

Importance of Intervention

Interventions are problem specific and interventions are provided to solve the problems related to instruction, behavior and health related issues. Intervention is provided to improve the existing situation and preventing from further deteriorating the situation. It is more importance in the case of early intervention approach. In early intervention, early identification, early detection or diagnosis is required. Once the diagnosis is completed, intervention strategies are prepared. Early intervention is essential due to the following reasons:

- Neural circuits, which create the foundation for learning, behavior and health, are most flexible or "plastic" during the first three years of life. Over time, they become increasingly difficult to change.
- Persistent "toxic" stress, such as extreme poverty, abuse and neglect, or severe maternal depression can damage the developing brain, leading to lifelong problems in learning, behavior, and physical and mental health.
- The brain is strengthened by positive early experiences, especially stable relationships with caring and responsive adults, safe and supportive environments, and appropriate nutrition.
- Early social/ emotional development and physical health provide the foundation upon which cognitive and language skills develop.
- High quality early intervention services can change a child's developmental trajectory and improve outcomes for children, families, and communities.
- Intervention is likely to be more effective and less costly when it is provided earlier in life rather than later.

Positive early experiences are essential prerequisites for later success in school, the workplace, and the community. Services to young children who have or are at risk for developmental delays have been shown to positively impact outcomes across developmental domains, including health, language and communication, cognitive development and social/emotional development. Families benefit from early intervention by being able to better meet their children's special needs from an early age and

throughout their lives. Benefits to society include reducing economic burden through a decreased need for special education.

There is a general acceptance in the literature that quality early childhood intervention services for children with disabilities can have beneficial effects on the functioning of children as well as on the adaptation of their families. Researchers are now emphasizing the need for research that determines what types of intervention are most effective for children with different types of disability, for children of different ages, and for children from different family backgrounds. Efforts are also necessary to ensure that early intervention is equally accessible and effective for families from diverse cultures.

4.2 Educational Intervention Strategies for Children with Autism Spectrum Disorders (ASD)

Children with autism are among the most difficult students to teach. They may focus on irrelevant stimuli while seeming oblivious to instructional stimuli, show little or no apparent interest in their teachers and peers, and with little or no warming have a "meltdown" that includes aggression, property destruction, self-injury or all three. Seldom does a child with autism progress without an education that is truly special. Such children require instruction that is meticulously planned, skillfully delivered, and continually evaluated and analyzed for its effectiveness. The good news is that a great deal of exciting research is providing professionals with tools to significantly improve educational outcomes for children with autism.

4.2.1 Intensive behavioral intervention

Early intensive behavioral intervention has helped some children with autism learn communication, language, and social skills so that they have been able to succeed in general education classroom. One of the earliest and most powerful examples of the potential of systematic early intervention of the lives of children with autism is the work of Ivar Lovaas and his colleagues at the University of California. Lovaas reported the results of a study that provided a group of 19 children with autism with an intensive early intervention program of one-to-one behavioral treatment for 40 hours per week for 2 years or more prior to age 4. Intervention also included parent training and inclusion in the preschool setting with typically developing children. When compared with a group of 19 children at age 7, the children

in the early intervention group had gained an average of 20 IQ points and made major advances in educational achievement.

The work of Lovaas and colleagues was a landmark accomplishment in the education of children with autism. First, they discovered and validated at least some of the factors that can be controlled to help children with autism achieve normal functioning in a general education classroom. Second, the dramatic improvements that were previously considered unattainable in the children's social, communication, and cognitive functioning helped spur wide-ranging interest and research funding for a disorder for which custodial care was thought to be the only option. Third, the successful outcomes provided a legitimate basis for hope and encouragement for parents and teachers desperate to learn how to help children with autism.

4.2.2 Applied behavioral analysis

The teaching methods used in the Lovaas early intervention project were derived from applied behavior analysis (ABA). ABA provides a scientific approach to designing, conducting, and evaluating instruction based on empirically varied principles describing functional relationships between events in the environment and behavior change. Children receive repeated opportunities to practice and use their new skills across the day, settings, people and situations. Treatments based on other models can yield beneficial outcomes for children with autism. For example, an intervention derived from developmental psychology and designed to improve joint attention and symbolic play enhanced mother-child interactions and raised children's scores on standardized test of IQ and language. However, no other form of treatment for children with autism has the amount or quality of scientific evidence attesting to its effectiveness that treatment informed by ABA has. Intervention programs consisting of an eclectic mix of components from different treatment models are not as effective as programs based on ABA. After an extensive review of research on autism treatments, National Autism treatment Centers concluded that eleven treatments are confidently considered as "established treatment".

Many parents are confused about what ABA is and is not because document accomplishments of some children with autism after receiving intensive ABA therapy, many parents and practitioners have advocated for ABA programs and services for children with autism. However, misunderstanding about ABA is widespread.

What ABA is?

ABA is individualized, skills and behavioral deficits are assessed and goals are selected on the individual basis. This focuses on the child and his/her family.

- ABA is data based evaluation and decision making
- ABA is designed to be effective
- ABA is doable
- ABA is, in the words of one mother of a young child with autism, "Good old-fashioned hard work".

What ABA is not?

- ABA does not prescribe instructional settings, teaching formats, or materials
- ABA is not bribery. Every effort is made to increase children's motivation and make learning fun. Naturally occurrences are used as rein forcers whenever possible.
- ABA is not punitive. Positive strategies are used until they are exhausted, and reinforces are delivered systematically to increase appropriate behavior. The goal of ABA s not to decrease maladaptive behavior but to increase the strength and frequency of appropriate behavior.

Systematic strategies based on ABA for teaching students with autism:

- Strategies for shifting control over a student's responses from contrived stimuli to naturally occurring stimuli and events he encounters in his environment.
- Alternative forms of communication such as Picture Exchange Communication System
- Peer mediated intervention for social relationship
- Methods of errorless discrimination learning
- Development of stimulus equivalence classes in which students learn relationships that are not taught directly, thereby expanding the power of instruction
- Functional assessment of challenging behavior
- Pivotal response intervention
- Naturalistic language intervention

ABA is not a panacea, it is the most effective intervention we have at the current time. ABA does not offer answer as to why autism happens; of course it offers a practical means of helping children who are autistic.

4.2.3 Visual supports

Visual supports is to help students with autism cope with social situations and increase their independence in the classroom. It encompasses a wide variety of interventions that involve visual cues and prompts that help students perform skills with greater independence and accuracy. Picture activity schedules and social stories are two strategies for students with ASD that entail visual supports.

Picture activity schedules

Some level of independent performance is needed for success in inclusive classroom settings. For preschoolers with autism, a lack of play skills "might prevent lack of opportunities for learning and successful participation in inclusive classrooms. The impeding isolation might serve to perpetuate the children's deficits in socialization and communication." Several studies have found that children with autism can be taught to use picture activity schedules to increase their independence in selecting and carrying out a sequence of activity in the classrooms. For example, video modeling can be incorporated to activity schedule, multimedia activities also promotes dependence among children with autism.

Social stories

A major challenge for many individuals with autism is learning to tolerate change and how and when to use communication and social interaction skills within the typical rules and conventions that govern social situations. Social stories explain social situations and concepts, including expected behavior of the person involved, in a format understandable to an individual with ASD. Social stories can answer a child's questions about concept and provide information about social behavior that she is not likely to ask or obtain in other ways. According to Gray and Grand (1993), social stores can be used to describe the situation and expected behavior, explaining simple step for achieving certain goals or outcomes, and teach new routines and anticipated actions. Although the purpose of social stories to describe the situation, not direct the child behavior. A number of studies have reported improvements in children behavior after systematic exposure to social stories.

Providing social stories before an event or activity can decrease a child's anxiety, improve his behavior, and help him understand the event from the perspectives of others. Ivey and colleagues (2004) found that three 5 to 7 years old boys with autism increased their independent and appropriate participation

in novel activities with parents introduced stories to the children and read them once a day for 5 days before the events.

4.3 Educational Intervention for the Students with Communication Disorders

Children with specific speech and language difficulties (SSLD) pose a challenge to the education system, and to speech and language therapists who support them, as a result of their language needs and associated educational and social–behavioral difficulties. Various approaches are employed in the treatment of children with communication disorder. Speech-language pathologist (SLP) is the preferred term for the school-based professional with primary responsibility for identifying, evaluating and providing therapeutic services to children with communication disorders. But the terms such as speech therapist, speech clinician, and speech teacher are still used in some schools. As a key member of IEP team, the SLP's goal is to correct the child's speech and /or language problems or to help the child achieve the maximum communicative potential, which may involve compensatory techniques and/or augmentative and alternative means of communication. Speech-language pathology addresses both organic and functional causes and encompasses practitioners with numerous points of views who use a wide range of accepted intervention techniques.

4.3.1 Treating Speech Sound Errors

A general goal of specialists in communicative language is to help the child to speak clearly and pleasantly as possible so that a listener's attention will focus on the child's message rather than how he says it.

Articulation errors

The goals of therapy for articulation problems are acquisition of the correct speech sounds, generalization of the sound to all speaking settings and contexts and maintenance of the correct sounds after therapy has been ended. Traditional articulation therapy involves discrimination and production activities.

Discrimination activities are designed to improve the child's ability to listen to carefully and detect the differences between similar sounds (e.g. the /t/ in "take", the /c/ in "cake") and to differentiate between correct and distorted speech and sounds. The child learns to match his speech to that of a standard

model by using auditory, visual, and tactual feedback. A generally consistent relationship exists between children's ability to recognize sounds and their ability to articulate them correctly.

Production is the ability to produce a given speech sound alone and in various contexts. Therapy emphasizes the repetitive production of sounds in various contexts, with special attention to the motor skills involved in articulation. Exercises are employed to produce sounds with differing stress patterns. The SLP may have the child carefully watch how sounds are produced than use a mirror to monitor his own speech production. Children are expected to accurately produce problematic sounds in syllables, words, sentences, and stories. They may tape-record their own speech and listen carefully for errors. Therapy progress from having the child articulate simple sounds in isolation; then in syllables, words, phrases, sentences, and structured conversation; and finally in unstructured conversation. As in all communication training, it is important for the teacher, parent, and specialist to provide a good language model, reinforce the child's improving performance, and encourage the child to talk.

4.3.2 Treating stuttering and fluency disorders

Throughout the history, people who stutter have subjected to countless treatments-some of them unusual, to say the least. Past treatments included holding pebbles in the mouth, sticking fingers into a light socket, talking out of one side of the mouth, eating raw oysters, speaking with the teeth clenched, taking alternating hot and cold baths, and speaking on inhaled rather than exhaled air For many years, it was widely thought that a tongue could not function properly in the mouth caused stuttering. As a result, it was common for early physicians to describe ointments to blister or numb the tongue or even to remove portions of the tongue through surgery!

Application of behavioral principles has strongly influenced recent practices in the treatment of fluency disorders. A therapist using the methodology regards stuttering as learned behavior and seeks to eliminate it by establishing and encouraging fluent speech. For example, one stuttering treatment program called the Lidcombe Program in the USA trains parents to positively reinforce their child's fluent utterances in the home. Children may lean to manage their stuttering deliberately prolonging certain sounds or by speaking slowly to get through a "block." they may increase their confidence and fluency by speaking in groups, where pressure is minimized and successful speech is positively reinforced. They may learn to monitor their own speech and to reward themselves for periods of

fluency. They may learn to speak to a rhythmic beat or with the aid of devices that mask or delay their ability to hear their own speech. Tape recorders are often used for drills, simulating conversations, and documenting process.

Children often learn to control their stuttering and produce increasingly fluent speech as they mature. No single method of treatment has been recognized as most effective. Stuttering frequently decreases when children enter adolescence, regardless of which treatment method was used. Often, the problem disappears with no treatment at all. Results from studies of the phenomenon of spontaneous recovery from stuttering have reported that 65% to 80% of children diagnosed as stutters apparently outgrow or get over their dysfluencies without formal intervention.

Early intervention may prevent the child from developing a severe stutter. In its initial stages, stuttering can always be treated successfully by teachers, parents and speech language pathologists working together. When interacting with a child, who stutters, a teacher should pay primary attention to what the child is saying rather than to difficulties in saying it. When a child experiences a verbal block, the teacher should be patient and calm, say nothing, and maintain eye contact with the child until he finishes speaking. Teachers can provide good speech model, improving the child's self-esteem, and creating a good speech environment.

4.3.3 Treating voice disorders

A thorough medical examination should be sought for a child with a voice disorder. Surgery or other medical intervention can often treat organic causes. In addition, SLPs sometimes, recommend environmental modifications; a person who is consistently required to speak in a noisy setting, for example, may benefit from the small microphone to reduce vocal straining and shouting. Most medical techniques, however offer direct vocal rehabilitation, which helps a child with a voice disorder gradually learn to produce more acceptable and efficient speech.

Voice therapy often begins with teaching the child to listen to his own voice and learn to identify those aspects that need to be changed. Depending on the type of voice disorders, and the child's overall circumstances, vocal rehabilitation may include activities such as exercises to increase breathing capacity, relaxation techniques to reduce tension, or procedures to increase or decrease the loudness of speech.

Because may voice problems are directly attributable to vocal abuse, behavioral principles can be used to help children and adults break habitual patterns of vocal misuse. For, example, a child might self-monitor the number of abuses he commits in the classroom or at home, receiving reinforcement for gradually lowering the number of abuses over time. Computer technology has also been successfully applied in the treatment of voice disorders. Some instruments enable speakers to see visual representation of their voice patterns on a screen or a printout; speakers are thus able to monitor their own vocalizations visually as well as auditorily and to develop new patterns of using their voices more naturally and efficiently.

4.3.4 Treating language disorders

Treatment for language disorders are also extremely varied. Some programs focus on pre-communication activities that encourage the child to explore and that make the environment conducive to the development of receptive and expressive language. Clearly, children must have something they want to communicate. And because children learn through imitation, it is important for the teacher or specialist to talk clearly, use correct infections, and provide a rich variety of words and sentences.

The challenging and expanding role of school-based SLPs today includes connecting children's oral language to literacy components of the curriculum as much as possible. This is done in a variety of ways, for example, children with very limited or language might be taught how to orally "read" pictures as a language enhancement activity. Children with language impairments might develop written language skills by exchanging e-mail letters to pen pals.

Speech language pathologists are increasingly naturalistic interventions to help children develop and use language skills. Naturalistic approaches were developed as an alternative to didactic language interventions because children often experienced difficulties in generalizing new skills from structured teaching settings to everyday contexts. In contrast to didactic teaching approaches, which contrived materials and activities and massed trial to teach specific skills, naturalistic interventions are characterized by dispersed learning trials carried out in the natural environment as opportunities occur for teaching functional communication.

Kaiser and Grim (2006) make the following recommendations about naturalistic interventions, which are also known as *milieu teaching strategies*:

- Teach when the child is interested
- Teach what is functional for the student at the moment
- Stop while both the student and the teacher are still enjoying the interaction

Naturalistic interventions involve structuring the environment to create numerous opportunities for desired child responses and structuring adult responses to a child's communication. Effective milieu teaching more closely resembles a conversation than a structured instructional episode.

However; good naturalistic teaching does not mean the teacher should wait patiently to see whether and when opportunities for meaningful and interesting language use by children occur. Environment in which language teaching takes place should be designed to catch student's interest and increase the likelihood of communicative interactions that can be used for teaching purpose. No matter what the approach to treatment, child with language disorders need to be around children and adults with something interesting to talk about. Study showed that one-to-one setting was the best for language development.

Emphasis was on eliminating distracting stimuli and focusing a child's attention on the desired communication task. Today, however, it is generally recognized that language is an interactive, interpersonal process and the naturally occurring intervention formats should be used to expose children with language disorders to a wide range of stimuli, experiences, contexts, and people that cannot be replicated in one-to-one therapy. Whatever intervention method they use, effective speech language pathologist establish specific goals and objectives, keep precise records of their student's performance, and arrange the learning environment so that each child's efforts at communication will be rewarded and enjoyable.

4.3.5 Augmentative and alternative communication

Augmentative and alternative communication (AAC) refers to a diverse set of strategies and methods to assist individuals who are unable to meet their communication needs through speech or writing. AAC has three components:

- A representational symbol set or vocabulary
- A means for selecting the symbols
- A means for transmitting the symbols

Components of AAC are aided or unaided. Unaided techniques do not require a physical aid or device. They include oral speech, gestures, facial expression, general body posture, and manual signs. Of course, individuals without disabilities use a wide range of unaided augmentative communication techniques. Aided techniques of communication involve an external device or piece of equipment. AAC devices can be simple, low-tech affairs or sophisticated equipment.

Individuals who do not speak so that others can understand must have access to vocabulary that matches as nearly as possible the language they would use in various situations if they could speak. It has been suggested that decisions about what items to include in a student's augmentative vocabulary should take into account the followings:

- Vocabulary that peers in similar situations and setting use
- What communication partners think will be needed
- Vocabulary the student is already using in all modalities
- Contextual demands of specific situations

Symbol sets and symbol system

After selecting the vocabulary for an AAC system, a collection of symbols must be chosen or developed to represent the vocabulary. There are numerous commercially available symbol sets, a collection of pictures of drawings in which each symbol has one or more specified meaning, from which a person's AAC vocabulary might be constructed. Symbol sets are graphic (symbol set can represent the object) or electronic version of its symbols that can be incorporated into pictures overlays. Symbol sets may be home made, consisting of photos, pictures and perhaps words with the alphabets.

In contrast to symbol sets, symbol systems are structured around an internal set of rules that govern how new symbols are added to the system. One of the best known symbol system is Blissymbolic, which represents concepts through a combination of geometric shapes. The user of Blissymbolic combines multiple symbol to create new meanings (e.g. "school" is communicated by selecting the symbols "house-gives-knowledge"). Because many of the Blissymbolics are abstract, however, and do not like the concept they represent, some individuals have difficulty learning the system.

Selecting the symbols

Symbols are selected in augmentative communication by direct selection, scanning or encoding responses. Direct selection involves pointing to the symbol one wishes to express with a finger or fist or sometimes with a wand attached to head or chin. With a limited number of selections widely spaced from one another, the user can select symbols by "eye pointing". Scanning technique present choices to the users one at a time, and a user makes a response at the proper time to indicate which item or group of selections she wants to communicate. Scanning can be machine or listener assisted. Encoding involves giving multiple signals to indicate the location of the symbol or the item to be selected. Usually, the users make the pairs of responses that directs the listener to a specific printed message on a reference list. In a display in which symbols are organized by color and number, for example, a student can first touch one card (to select the red group of messages) and then make a second pointing response to indicate which number message in the red group is intended.

Transmitting the symbols:

Once vocabulary and symbol set have been selected, a method of transmitting the symbols must be determined. The most common tool for augmentative communication display and transmission is the communication board a flat area (often a tray or table attached to the wheelchair) on which the symbol are arranged for the user to select. A student may have a basic communication board of common words, phrases, numbers, and so forth for use across many situations. He may also have various situational boards, or mini-boards, with specific vocabulary for certain situations. Symbols can also be transported and displayed in a wallet or photo album.

A variety of electronic devices offers a wide range of alternatives for transmitting communicaton symbols. Dedicated communicaton aids-such as the Prentke Romich Intro Talker, the Prentke Liberator, DECtalk by Digital Equipment Company, and Sentiment System's Dynavok-offer computerized speech selection and transmission. To learn how the Dynavok and other assistive technology were used to help an 11-year old boy who was unable to speak and participate in the regular classroom.

4.4 Educational Intervention for the Students with Hard of Hearing and Deafness

Over the years, many philosophies, theories, and specialized methods and materials have been developed for teaching children who are deaf and hard of hearing. Most of these approaches have been enthusiastically promoted by their advocates and critically denounced by others. Indeed, for than 100 years people have waged an impassioned debate over how best to teach children who do not hear. The three approaches to teaching deaf and hard of hearing students today are the oral/aural approach, total communication, and bilingual-bicultural approach. Regardless of instructional approach or the academic subject area at hand, the primary objective of all teachers of students with hearing loss is the development and use of language communication skills.

4.4.1 Oral/Aural approaches

Educational programs with an oral/aural emphasis view speech as essential if students who are deaf are to function in the hearing world. Training in producing and understanding speech and language is incorporated into virtually all aspects of the children's education. A purely approach without any manual communication was used widely in the USA prior to the 1970s. Today, only about one-fourth of educational programs for students with hearing loss identity themselves as solely oral/aural program. A child who attends a program with an oral emphasis typically uses several means to develop residual hearing and the ability to speak as intelligibly as possible. Auditory, visual, and tactile methods of inputs are frequently used. Much attention is given to amplification, auditory training, speech reading, the use of technological aids, and, above all talking. A few schools and classes maintain purely oral environment and may even prohibit children from pointing, using gestures, or spelling out words to communicate. Children in these programs must express themselves and learn to understand others through speech alone. Other oral/aural programs also emphasize speech and listening skills but are more flexible and may use and encourage a variety of approaches to help students produce and understand spoken language.

The auditory-verbal approach: Listening comprises 45% of daily communication for adults, and children spend up to 60% of the school day in situations where they are expected to be listening effectively. Many children with hearing loss have much more auditory potential than they actually use,

and their residual hearing cab be improved in the context of actual communication and daily experiences.

The auditory-verbal approach focuses exclusively on using audition to improve speech and language development. It assumes that most children with hearing impairment have some residual hearing that they can use to their benefit. It relies heavily on amplification technology, such as hearing aids and cochlear implants, and stresses that this amplification technology should be instituted at as young age as possible. This approach also places a heavy emphasis on speech training.

The auditory-oral approach: The auditory-oral approach is similar to the auditory-verbal approach, but it also stresses the use of visual cues, such as speech reading and cued speech. Sometimes inappropriately called *lip-reading*, *speechreading* involves teaching children to use visual information to understand what is being said to them. *Speechreading* is a more accurate term than *lip-reading* because the goal is to teach students to attend to a variety of stimuli in addition to specific movements of the lips.

Cued speech is a way of augmenting *speechreading*. It is a method of supplementing oral communication. It supplies a visual representation of spoken language by adding cues, in the form of hand signals near the chin, to assist in identifying syllabic and phonetic features of speech that cannot be distinguished through speechreading. In cued speech, the individual uses hand shapes to represent specific sounds while speaking. Eight hand shapes are cues for certain consonants, and four serve as cues for vowels. Cued speech helps the speech reader differentiate between sounds that look alike on the lips. Although it has some devoted advocates, cued speech is not used widely in the United States.

4.4.2 Total communication

Educational programs with an emphasis on total communication (also called simultaneous communication, or simcom) advocate the use of a variety of forms of communication to teach English to students with hearing loss. Practitioners of total communication maintain that the simultaneous presentation of English by speech and manual communication makes it possible for children to use either one or both types of communication. In other words, combination of oral and manual methods is called total communication. Total communication involves the simultaneous use of speech with one

of the signing English systems. These signing systems are approaches that professionals have devised for teaching people who are deaf to communicate. Finger spelling, the representation of letters of the English alphabet by finger positions, is also used occasionally to spell out certain words. Dissatisfaction with total communication has been growing among some professionals and many within the Deaf community. The focus of the criticism has been on the use of signing English systems rather than ASL.

Manually coded English: Teacher who practice total communication generally speak as they sign and make a special effort to follow the form and structure of spoken English as closely as possible. Several English based sign system have been designed for educational purposes with the intention of facilitating the development of reading, writing and other language skills in students with hearing loss. Manually coded English refers to several educationally oriented sign system, such as Signing Essential English (SEE I), Signing Exact English (SEE II) and Sign English. While manually coded English borrows many signs and incorporates some of the features of American Sign Language, it also seeks to follow correct English usage and word order. Unfortunately, deaf students often learn and use two or more sign language systems, depending on the person with whom they are communicating.

Fingerspelling: Fingerspelling, or the manual alphabet; is used to spell out proper names for which no signs exist and to clarify meanings. It consists of 26 distinct hand positions; one for each English letter. A one-hand manual alphabet is used in the United States and Canada. Some manual letters-such as "C," "L," and "W" – resemble the shape of printed letters, whereas others-such as "A," "E," and "S"- have no apparent similarity. As in typewriting, each word is spelled out letter by letter.

Some educators have expressed concern about the quality of signing in many total communication classrooms, nothing the linguistic inconsistency in the signing behavior of teachers. Although English is promoted as the primary language base in total communication programs, Pidgin Sign English (PSE)-a mixture of English, ASL, and invented signs that represents no standard language-best describe the way in which most teachers tend to sign.

4.4.3 Bilingual-Bicultural approach

Bilingual–Bicultural or Bi-Bi deaf education programs use sign language as the native, or first, language of deaf children. In the United States, for example, American Sign Language (ASL) is the natural first language for deaf children. The spoken or written language used by the majority of the

population is viewed as a secondary language to be acquired either after or at the same time as the native language. In Bi-Bi education, sign language is the primary method of instruction. The bicultural aspect of Bi-Bi education emphasizes Deaf culture and strives to create confidence in deaf students by exposing them to the Deaf community.

Various studies have found a correlation between ASL skill level and English literacy or reading comprehension. The most plausible explanation for this is that ASL skill level predicts English literacy level. Having a basis of American Sign Language can benefit the acquisition of the English language. In fact, bilingual children show more development in cognitive, linguistic, and meta-linguistic processes than their monolingual peers.

There are some variations in bicultural-bilingual approach exist, most contain these three features:
- ASL is considered the primary language, and English is considered the secondary language.
- People who are deaf play an important role in the development of the program and its curriculum.
- The curriculum includes instruction in Deaf culture.

Bilingual education for students who are deaf can be structured so that ASL is learned first, followed by English, or the two can be taught simultaneously.

Some ASL signs are conic; that is, they convey meaning through hand shapes or motions that look like or appear to imitate or act out their message. In making the sign for "cat" for example, the signer seems to be stroking feline whiskers on her face; in the sign for "eat" the hand moves back and forth into an open mouth. Most signs, however, have little or no iconicity; they do not resemble the objects or actions they represent. If sign language were simply a form of pantomime, the most non-signers would be able to understand it with relative ease. But the vast majority of signs cannot be guessed by people who are unfamiliar with sign language.

4.5 Educational Intervention for the Students with Blind and Low Vision

Approximately 90% of individuals with visual impairments have functional or low vision; just 10% are functionally blind. However, students with low vision are often an overlooked majority in the population of children who are visually impaired. Difficulties of students with low vision are often not as apparent

as they are for students who are blind. Nonetheless, students with low vision require direct instruction in literacy, visual efficiency, accessing the core curriculum, compensatory skills and more. The following educational interventions are beneficial to students in any school setting.

4.5.1 Special adaptations for blind students

Students who are blind need to acquire a range of aids and devices for obtaining and conveying information. Such aids and devices enable blind and visually impaired students to access and store information from libraries around the world and the Internet. In addition, blind students can use assistive technology for note taking, studying for tests, research and a variety of other academic uses.

Blind students have unique educational needs which can be effectively met using a team approach of professionals, teachers, parents and students. In order to meet their unique needs, specialized services such as books and materials written in Braille and other assistive technologies must be provided. Furthermore, there must be a full range of program options and support services so that the Individualized Education Program (IEP) team can select the most appropriate placement in the Least Restrictive Environment (LRE) for each individual student with visual impairment. For many students with print disabilities, the limitations of print materials create barriers to access, and therefore to learning. In 2004, Congress passed amendments to IDEA requiring printed textbooks, printed core materials, and other educational materials to be converted to alternate formats (Braille, large print, electronic text, and audio recordings) to meet the unique learning needs of students with print disabilities in United States of America.

Use of Braille and technical aids

Braille was invented by Louis Braille in 1829. Braille can be printed on paper and various other materials. Braille technology is an assistive technology which allows blind or visually impaired people to do common tasks such as writing, typing in braille and printing in text, downloading reading documents, etc. It also allows blind or visually impaired students to complete all assignments in school as other common peers. The advances of Braille technology are meaningful because blind people can access more texts, books and libraries and it also facilitates the printing of braille texts.

Most braille books are large, expensive, and bulky. It can be difficult for students to retrieve information quickly when they must tactilely review many pages of braille books or notes. Technological

developments have made braille more efficient, thus enabling students who are blind to function more independently in general education classrooms, universities, and employment settings.

Tactile aids and manipulations

Students with visual impairments use tactile and kinesthetic input to learn about their environments. Tactile and kinesthetic input can provide students with information about objects they come in contact with and use. Manipulative are generally recognized as effective tools in teaching basic mathematics skills to elementary students. When using manipulative such as Cuisenaire rods, sighted students use length and color to distinguish the various numerical values of the rods. Belcastro (1993) developed a set of rods that enables blind students to identify different values quickly by feeling the lengths and tactile markings associated with each. Other math manipulative commonly include Braille math blocks, Digi-Blocks, and APH tools to enhance number system concepts. Another mathematical aid for students who are blind is the Cranmer abacus, which has been used to assist students who are blind in learning number concepts and making calculations. Manipulation of the abacus beads is particularly useful in counting, adding, and subtracting.

For more advanced mathematical functions, the student is likely to use the speech-plus talking calculator, a small electronic instrument that performs most of the operations of any standard calculator. Talking clocks and spelling aids are also available. In the sciences and social studies, several adaptations encourage students who are blind to use their tactile and auditory senses for firsthand manipulation and discovery.

Any visual materials used in classrooms need to be adapted for use by students who do not have the visual skills required for the task. Charts, models, maps, and graphs will have greater educational value for students with visual impairments if they can be read using the sense of touch. For example, outlining map boundaries with string enables students with visual impairments to use their sense of touch to read maps. Whenever teachers use manipulative, models, or other equipment; students with visual impairments need the opportunity to use their tactile and kinesthetic senses to become familiar with the objects to benefit from their use in lessons. Teachers should introduce students with visual impairments to materials and equipment used in activities such as science experiments before the activity. If students have the opportunity to learn about the materials or equipment before the activity

begins, they will be more able to concentrate on the concept being taught rather than on what equipment they are using.

The blind usually do not draw because that medium is not adapted to touch. Tactile drawings are generally executed on swell paper using a special pen that causes lines to be raised. Although some rules appear to be universal, the drawings of the blind are in many ways different from those of the sighted. Recently, Kurze created a drawing system for the blind specifically to study their technique. The system relies on a touch tablet, voice recognition (simulated), voice synthesis and swell paper. Thus, visual pictures must be simplified and carefully adapted if they are to be used by the blind. However, identifying tactile drawing is very difficult. This may be particularly true for the congenitally blind.

Technological aids for reading print

Character recognition software designed for people who are blind or visually impaired converts printed or electronic text into spoken words. The Kurzweil 1000 is a sophisticated computer-based reading system that uses an optical-character recognition system to scan and read text with synthetic speech. The users can regulate the speed, have the machine spell out words letter by letter if desired, and even choose from a variety of natural-sounding voices that can be modified to suit individual preferences.

Ability to read printed material or diagrams - students with visual impairment may access information in a variety of ways, for example Braille, audio, or enlarged print. Braille readers cannot skim reading text properly, and may take up to three times as long as other students to read a text. Students with some vision may be large-print readers or may not be able to read at all without using special computer software or equipment. Many blind students prefer material in an electronic format and use a screen reader such as JAWS. Some students may want material reformatted into alternative formats. Extra time is needed for this, and the student must wait for the material to be produced for them. Skim reading may be very difficult or impossible and reading may need to be carefully paced to avoid fatigue or eye strain. Headaches often result from eyestrain. This may reduce considerably the study time available to these students. Finding books in the library may be impossible without assistance. Many are unable to read examination questions and handouts in standard print or read their own handwriting when answering examination questions. They may also be unable to take their own notes. Extra time

is needed to carry out some tasks, such as locating words in a text when shifting from one reading medium to another.

Much of the written information available to the sighted is in the form of printed text, and all cannot be expected to be translated to an appropriate medium for the blind. It indicates that the accessibility to the print is a problem for them. The Kurzweil Reading Machine was the first to combine an optical scanner, optical character recognition software, and a speech synthesizer to provide access to printed material. The various components of that system are now widely available commercially and allow the blind some access to printed material. Such a system, however, is not portable and may not be capable of recognizing degraded text or handwriting.

Computer assisted learning

Both teaching and learning are become easier after the advancement of computer. Assistive technology that provides access to personal computers has opened tremendous opportunities for education, employment, communication, and leisure enjoyment for individuals with visual impairments. These technologies include hardware and software that magnify screen images and speech-recognition software that enables the user to tell the computer what to do and software that converts text files to synthesized speech.

Keyboarding is an important means of communication between children who are blind and their sighted classmates and teachers, and is also a useful skill for further education and employment. Instruction in keyboarding should begin as early as feasible in the child's school program. Handwriting is seldom taught to students who are totally blind, with the noteworthy exception of learning to sign one's name for tasks such as maintaining a bank account, registering to vote, and applying for a job.

4.5.2 Special adaptations for students with low vision

A large majority (approximately 75 to 80 percent) of individuals with visual impairments has functional or low vision; just 10% are functionally blind. However, students with low vision are often an overlooked majority in the population of children who are visually impaired. Difficulties of students with low vision are often not as apparent as they are for students who are blind. Nonetheless, students with low vision require direct instruction in literacy, visual efficiency, accessing the core curriculum, compensatory skills and more. If the situation does not permit the TVI to perform all necessary specialized instruction

with a student, the TVI will generally oversee or direct the instructional process. A TVI is a teacher who specializes in working with students who are visually impaired. Most often, when a new student with a visual impairment enters a school system, it is the TVI who is responsible for assessing the student, determining and aiding in adaptations and modifications, as well as creating individualized education programs (IEPs). The following educational interventions are beneficial to students in any school setting.

One of the principal concerns for students with low vision is their ability to access the visual environment. Just as students who are blind have difficulty with environmental cues such as facial expressions and eye contact, so too do students with low vision. One way for students to access the visual environment is through optical devices. Optical devices include magnifiers, microscopes, and tele-microscopes for accessing near information and monocular telescopes and bi-optic lenses for accessing distance information. Near devices aid a child in viewing regular print materials, non-textbook materials such as baseball cards, and menus. Distance devices are used for viewing information that is beyond arms reach, such as the chalkboard, menus in fast food restaurants, or sporting events. Because every child's vision is different, a certified professional should always prescribe optical devices. Every child with low vision should receive a clinical low-vision evaluation from an optometrist or ophthalmologist who specializes in such services.

Optical devices

Low vision optical devices include a variety of devices, such as stand and hand-held magnifiers, strong magnifying reading glasses, loupes, and small telescopes. Because these devices can provide greatly increased magnification powers and prescription strengths, along with higher-quality optics, they are different from regular glasses and commercially available magnifiers.

Low vision optical devices are task-specific. These devices are similar to "tools" that are used to build a house—different tools for different tasks. Therefore, eye doctor may prescribe several different low vision optical devices for various tasks: One or two devices for reading, another for watching television and seeing faces, another for seeing the computer screen, and yet another for sewing. The doctor may also recommend sunglasses to reduce glare, protect eyes from ultraviolet (UV) and blue light, and enhance ability to see more clearly in different lighting conditions. Some "near optical devices" are:
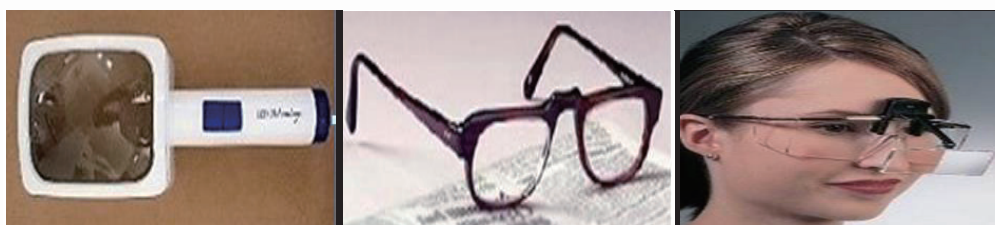
| A stand magnifier with a handle | A reading glasses | A clip-on loupe |

Tele-microscopic glasses are telescopes that are adapted and made for tasks at near, rather than at distance, like most telescopes. They are available in many different designs. Tele-microscopic glasses, in contrast to strong magnifying reading glasses, allow a more comfortable working distance when reading, using the computer, seeing sheet music, doing hand work, playing cards, and other tasks.

Tele- microscopic glass

A hand-held telescope

Clip-on telescope

Bi-optic telescope

Spectacle mounted

telescope

Such distance optical devices can either be hand-held, clip-on, or mounted in a frame to be hands-free. They can be used for brief spot-reading tasks, such as reading a sign, menu board, or the white board in school. They can also be used for longer viewing periods, such as watching television, seeing a movie or ball game, viewing a play or program, and enjoying scenery.

Reading print

There are three approaches for the students with low vision to use for reading print. They are a) magnification b) optical lenses and c) large print. Books in the market are available in large print for children with low vision. The American Printing House for the Blind produces books in 18-point type. The size and style of the print fonts, spacing, paper, and quality of producing vary weekly. Although print size is an important variable, other equally important factors to consider are the print quality of the material, the font or typeface, the contrast between print and page, the spacing between the lines and the illumination of the setting in which the child reads.

Educators generally agree that a child with visual impairments should use the smallest size that s/he can read comfortably. A child may be able to transfer from large print to smaller print as reading efficiency increases. Reading the regular-sized print with or without the use optical devices increases the chances of wider variety of materials available and eliminates the added cost of obtaining large print books or enlarging texts with special duplicating machines. Additionally, regular-sized books are handier and easier to carry. If students are unable to read standard print efficiently, the educational team must carefully weigh the advantages and disadvantages of alternate approaches such as the use of large print or the use of magnifiers or assistive technology.

Classroom adaptations

Students with visual impairments may need accommodations to access the same assignments as their peers. These accommodations may include extended time, specialized instruction, specialized materials, and environmental adaptations to reach the same levels of performance as sighted students. For most students, accommodations should be designed so that success in the general curriculum can be attained without lowering expectations. Some students may also need modifications to the general curriculum to develop an appropriate individual program.

There are a lot of areas of adaptation in the classroom so that needs of the children with visual impairment. Adjusting light, desk, bench, wheel chair, sitting arrangement according to height of the student, hearing capacity, visual ability etc. may have a great impact in the students' achievement. It is important for students with low vision to make minor classroom adaptations. Adequate lighting, adjustable lamps, etc. in classroom are helpful for some children. Additional lighting should come from

the side to assist the student to utilize their greatest usable vision. Similarly, many students benefit from desk with adjustable or tilting tops so that they can read and write at close range without constantly bending over and casting a shadow. Writing paper should have a dull finish to reduce glare, an off-white color such as buff or ivory is generally better than white. It is also helpful to give students with low vision chairs with wheels so they can easily move around the chalkboard area or other places in the classroom where instruction is taking place without constantly getting up and down.

Adaptations on both materials and equipment are needed to fully utilize the visually handicapped person's sense of hearing, touch, smell, vision and even taste. Lowenfeld (1973) purposed three general principles about instructional adaptations for the children with visually impaired:

- *Concrete experiences:* Children with severe and profound visual disabilities learn primarily through hearing and touch. Through tactile observation of real objects in natural settings, students with visual handicaps come to understand shape, size, weight, hardness, textures, pliability and temperature.
- *Unifying experiences:* Visual experience tends to unify knowledge. A child who goes into a grocery store sees not only shelves and objects but also the relationships of shelves and objects in space. Children with visual impairments cannot understand these relationships unless teachers allow them the experience of the grocery store. In simple statement, children with visual impairments need teachers to give them concrete experiences and to explain the relationships among those experiences.
- *Learning by doing:* To learn about the environment, these children have to be motivated to explore that environment. A blind infant does not reach out for an object unless that object attracts the child through other senses (touch, smell, and hearing). Stimulate the child to reach and to make contact by introducing motivating toys or games.

4.5.3 Expanded core curriculum (ECC)

The "core curriculum" is defined as the knowledge and skills expected to be learned by a student by high school graduation. Generally, the core curriculum consists of knowledge and skills related to academic subjects. Mastery of the core curriculum is what both parents and teachers stress as essential for academic success in school, and later in life. This core curriculum becomes the foundation for almost all learning, from kindergarten through high school. With respect to blind and visually impaired students, the existing core curriculum, as developed for sighted students, is entirely

appropriate and generally available. Because educators of visually impaired students have developed expertise in curriculum adaptation, it should be possible to take any curriculum that has been developed and make it readily available for visually impaired learners. But most professionals hold a strong position that there is an expanded core curriculum (ECC) for visually impaired students that requires additional areas of learning.

The term expanded core curriculum (ECC) is used to define concepts and skills that often require specialized instruction with students who are blind or visually impaired in order to compensate for decreased opportunities to learn incidentally by observing others. In addition to the general education core curriculum that all students are taught, students with visual impairments, starting at birth, also need instruction in the ECC. The ECC areas include (A) needs that result from the visual impairment that enable the student to be involved in and make progress in the general education curriculum; and (B) other educational needs that result from the child's disability as required by IDEA. It requires the flexibility of school districts to make arrangements for services to occur beyond regular school hours to ensure the student learns the skills and receives the instruction in the ECC.

The experiences and concepts that sighted students casually and incidentally learned must be systematically and sequentially taught to the visually impaired student. However, the core curriculum for visually impaired students is not the same as for sighted students. Indeed, ECC is much larger and more complex. Expanded core curriculum incorporates the following areas or domain (Hatlen, 2003):

- *Assistive technology:* Assistive technology is an umbrella term that includes assistive and adaptive tools as well as instructional services that can enhance communication, access, and learning. It can include electronic equipment such as switches, mobile devices, and portable note-takers; computer access such as magnification software, screen readers, and keyboarding; and low-tech devices such as an abacus, a Brailler, Active Learning materials (e.g., Little Room), and optical devices.
- *Career education:* Career education will provide students with visual impairments of all ages the opportunity to learn through hands-on experiences about jobs that they may not otherwise be aware of without the ability to observe people working. They also learn work-related skills such as assuming responsibility, punctuality, and staying on task. Career education provides opportunities for students to explore and discover strengths and interests and plan for transition to adult life.

- *Compensatory access:* Compensatory skills include skills necessary for accessing the core curriculum including concept development; communication modes; organization and study skills; access to print materials; and the use of braille/Nemeth, tactile graphics, object and/or tactile symbols, sign language, and audio materials.

- *Independent living skills:* Independent living skills include the tasks and functions people perform in daily life to increase their independence and contribute to the family structure. These skills include personal hygiene, eating skills, food preparation, time and money management, clothing care, and household tasks. People with vision typically learn such daily routines through observation, whereas individuals with visual impairments often need systematic instruction and frequent practice in these daily tasks.

- *Orientation and mobility (O&M):* Orientation and mobility instruction enables students of all ages and motor abilities to be oriented to their surroundings and to move as independently and safely as possible. Students learn about themselves and their environments, including home, school, and community. O&M lessons incorporate skills ranging from basic body image, spatial relationships, and purposeful movement to cane usage, travel in the community, and use of public transportation. Having O&M skills enables students to acquire independence to the greatest extent possible, based on their individual needs and abilities.

- *Recreation and leisure:* Being unable to observe others reduces awareness of recreation and leisure options. Instruction in recreation and leisure skills will ensure that students with visual impairments will have opportunities to explore, experience, and choose physical and leisure-time activities, both organized and individual, that they enjoy. This *instruction* should focus on the development of life-long skills.

- *Self-determination:* Self-determination includes choice-making, decision-making, problem solving, personal advocacy, assertiveness, and goal setting. Students with visual impairments often have fewer opportunities to develop and practice the specific skills that lead to self-determination. Students who know and value who they are and who have self-determination skills become effective advocates for themselves and therefore have more control over their lives.

- *Sensory efficiency:* Sensory efficiency includes instruction in the use of vision, hearing, touch, smell, and taste. It also addresses the development of the pro-receptive, kinesthetic, and vestibular systems. Learning to use their senses efficiently, including the use of optical

devices, will enable students with visual impairments to access and participate in activities in school, home, and community environments.

- *Social interaction skills:* Social interaction skills include awareness of body language, gestures, facial expressions, and personal space. Instruction also includes learning about interpersonal relationships, self-control, and human sexuality. Almost all social skills are learned by visually observing other people. Instruction in social interaction skills in school, work, and recreational settings is crucial. Having appropriate social skills can often mean the difference between social isolation and a fulfilling life as an adult.

4.6 Role of Parents and Teachers in Early Intervention of Children with Special Needs.

a. Role of parents

For decades, parents of exceptional children have advocated for equal access to educational opportunities for their children and they have done so with impressive effectiveness. Parents also play crucial role in bringing about litigation and legislation establishing the right to a free and appropriate public education for children with disabilities. Parents are the first to identify the needs of the child and they are the one who loves their children the most. Parents have most authentic information regarding their children. Parents are the most concerned people of their children. And also, the life of parents are the most affected due to the disability of the children.

Rights of the family

Understanding the family's legal rights is part of becoming an informed advocate. Parents should have been provided with copies of relevant regulations and procedures, which protect the rights of families. If not, ask the service coordinator for them. Review these documents carefully and ask questions if parents do not understand something. If parent's native language is not English, you have the right to request explanations of services in your native language. Be aware that you must grant written consent for your child to be evaluated and receive services, and you may withdraw consent at any time. If a dispute arises, you have the right to file for due process.

Child's disability

In addition to understanding the family's rights, learn more about the child's disability so that they can help him or her more effectively. Ask the child's pediatrician (or therapist) for information on his or her condition. Research government and university websites for authoritative information. Ask the professionals who evaluate or treat the child to recommend relevant and credible books and websites.

Getting additional help

Create a network of support. This might mean having a trusted family friend or relative attend IFSP meetings with parents to provide moral support. It might also mean contacting a lawyer. It's best to find a lawyer who specializes in special education law, as this is a complex field. A special education lawyer can help parents navigate the educational intervention process and negotiate with the IFSP team on family's behalf, as well as guide parents through dispute settlement, either through mediation or a due process hearing. Parents should contact school district for a list of special education lawyers in their area, or can call state's special education advisory committee for referrals. Advocacy groups can also connect parents to local resources. Browse the list of organizations here or contact parent's state's education agency for a list of special education advocacy groups.

Contacting support groups

Look for local parent support groups, and banish from mind stereotypical images of people sitting in a circle commiserating with each other. Yes, a support group for parents of children with special needs can offer much-needed emotional and social support, but it can also help the parents advocate for their child. Networking with parents in similar situations can connect the parents to local resources. These parents have been through the early intervention/special education processes, and they can help to navigate the red tape.

If new parent cannot find a parent support group in their area, consider forming their own. Network with parents at child's daycare center, playgroup and library and should ask whether they are interested in pooling their resources. Find creative ways for members of parent support group to help one another; for instance, if a parent start a support group for parents of kids with speech disorders, the group might consider splitting the cost of hiring a private speech-language pathologist (SLP) for group sessions.

Participation in child's services

Your participation in the educational intervention process doesn't end when the IFSP is signed. Actively collaborate with the professionals who are providing services. They should provide regular progress reports; if they don't, request them. Parents should ask if they can observe therapy sessions so that parent can better help their child at home. Parents should ask about activities to do at home with their child that can improve his or her cognition, communication, social development or other areas that are a challenge. Doing so can help accelerate their child's progress and improve his or her quality of life.

b. **Role of teachers in early intervention**

Teachers are the key to any educational programs. Teachers are at the central position to set plans, instructional strategies, making IEP, implement them, evaluate and placement. Thus, the teachers have obvious role in early intervention. Teacher support the learning of children with special education needs by working closely with the adults in the child's life e.g. parents, teachers and other professionals, including other Ministry staff and health specialists. Teacher assess child and family needs by gathering information from the family about their needs in everyday settings and routines. Furthermore, teachers collect information from the ECE service or other professionals involved as part of the ongoing assessment and planning process. They also assist with the development of an individualized intervention plan for the child, family and teachers. Teachers play a key role in supporting the implementation of the plan, often through provision of coaching and mentoring for families and teachers. Teachers often take a lead role in the facilitation of services for children and families and support families at the time of their child's transition to school. This support may include; facilitating any funding application processes, developing a plan for transition, visiting selected schools with the family.

Let Us Sum Up

Intervention is the program or strategies used to change the behavior, health, knowledge, and skills for the children with special needs. Intervention is very important for preventing further deteriorating the existing problem. Intervention strategies for children with different disabilities are different. Children with autism and spectrum disorder need intensive behavioral intervention, applied behavioral analysis

and visual supports as the intervention methods. Similarly, in the case of the children with communication disorders, various approaches are employed in the treatment of children with communication problems. The major intervention strategies for children with communication disorders are treating speech sound errors through discrimination activities and production activities. Treating stuttering and fluency disorders is another strategy for intervention. Voice disorders can be treated by voice therapy, breathing exercise, relaxation and controlling loudness of the sound. Children with communication disorders have many alternative communication devices, methods and technologies called augmentative and alternative communication. AACs are aided and unaided techniques or piece of equipment. It consists of symbol set and symbol system which must be properly selected for the children with particular type of communication disorder. And finally, the transmission of the symbol must be determined. There are three major intervention approaches for children with hard of hearing and deafness called oral/aural approaches, total communication and bilingual-bicultural approach. Likewise, children with low vision and blindness need educational intervention called special adaptation. These adaptation consist separate strategies for blind student while children with low vision need different adaptation strategies. However, most of the blind and students with low vision need Expanded Core Curriculum (ECC). Parents and teacher's role in the early intervention process of children with special needs are crucial.

Unit-end Activities

Group "A"

Objectives questions:

Tick (√) the best answers

1. Which is not the change that can be created by educational intervention to the children with special educational needs?
   a. Influencing individual's knowledge
   b. Influencing individual's skills
   c. Increasing social support
   d. **Reducing medical complications**

2. Children with…………… are among the most difficult students to teach.

    a. Blind and students with visual impairment

    b. Students with autism and spectrum disorder

    c. Students with deaf and hard of hearing

    d. Students with physical disabilities

3. Which of the following statement is not correct about Applied Behavioral Analysis?

    a. ABA provides a scientific approach to designing, conducting, and evaluating instruction

    b. describes functional relationships between events in the environment and behavior change

    c. ABA uses behavioral principles such as positive reinforcement to teach children skills in a planned, systematic manner

    d. ABA emphasizes on only using learning theories in the instruction to children with special needs.

4. What is the major role of visual supports for the children with autism spectrum disorders?

    a. To help students cope with social situations and increase their independence

    b. To make the students able to take decisions to do all their academic and other activities

    c. To make the students physically fit and mentally sound

    d. To make the children able to see with their eyes properly

5. Children with autism spectrum disorder learn social skills, concepts, and expected behavior through…..

    a. Picture activity schedules

    b. Social stories

    c. Movies

    d. Role play

6. The ability to produce a given speech sound alone and various contexts is called……

    a. Communication

    b. Articulation

    c. Production

    d. Discrimination activities

7. According to Kaiser and Grim (2006), which is not the component of *milieu teaching strategies*?

    a. Teach when the child is interested

    b. Teach what is functional for the student at the moment.

    c. Stop while both the student and the teacher are still enjoying the interaction

    d. Teach in the controlled environment when the students divert their attention

8. A method of augmenting speech reading, a method of supplementing oral communication is also called…….
    a. **cued speech**
    b. total communication
    c. the auditory/oral approach
    d. the auditory/verbal approach

9. Which is not the feature of Bilingual-bicultural approach for educating deaf students and hard of hearing?
    a. ASL is considered the primary language, and English is considered the secondary language.
    b. People who are deaf play an important role in the development of the program and its curriculum
    c. The curriculum includes instruction in Deaf culture
    d. **The sign language and English language are only the medium of instruction**

10. Which one is not the approach for the students with low vision to use for reading print?
    a. Magnification
    b. Optical lenses
    c. **Computer**
    d. Large prints

Group "B"

Short answer questions:

1. What are the importance of intervention in special education process? Explain briefly.
2. Give the definition and meaning of Applied Behavior Analysis (ABA).
3. Why social stories telling to the students of autism spectrum disorder important?
4. What do you understand by augmentative and alternative communication? Write in brief.
5. How optical devices help in adapting students with low vision? Explain in short.

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Group "C"

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Long answer questions:

1. What do you understand by visual supports? Explain intensive behavioral intervention for students with autism spectrum disorder.
2. Define communication disorder. Explain the strategies for treating language disorders in students with communication disorder.
3. State and explain the role of parents in early intervention in special education.

Points of Discussion

- Role of teachers in early intervention
- Discuss how ECC can be administered in our context
- Think about using classroom adaptation
- Treating stuttering and fluency disorder in case of Nepal
- Intervention and early intervention efforts in Nepal

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