

# Human Development (Condensed)

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THE NORTH DAKOTA STATEWIDE

DEVELOPMENTAL DISABILITIES

STAFF TRAINING PROGRAM

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## TABLE OF CONTENTS

	<u>Page</u>
Overview	3
Unit I: Principles of Human Development	4
Introduction	4
Stages of Development	5
Basic Principles of Human Development	6
Jean Piaget’s Theory of Development	6
Piaget’s Cognitive Development Theory and Its Implications for Individuals with Intellectual Disability	8
Eric Erikson’s Theory of Social/Emotional Development	9
Moral Development	10
Terms Used in the Study of Human Development	13
Feedback Exercise I	15
Unit II: Developmental Stages and Patterns of Behavior	17
The Age of Dependence - Birth to 24 months	17
Age of Exploring - 24 to 36 months	18
Pre-school Children Ages 3-5	19
Early Elementary Children Ages 5-8	20
Late Childhood/Pre-adolescence Ages 8-11	21
Adolescence	21
Adulthood and Aging	22
Aspects of Aging	22
Feedback Exercise II	24
Unit III: Factors That Cause or Impede Typical Human Development	25
Causes of Disabilities	25
Categories of Disabilities	26
Intellectual Disabilities	26
Specific Learning Disabilities	28
Behavioral Disabilities (SED)	29
Autism	30
Communication Disabilities (Speech and Language Impairments)	31
Sensory Impairments (Vision, Hearing, Deaf-blindness)	31
Physical, Medical and Other Health Related Problems	32
Feedback Exercise III	34
Answer Sheets	36
Simulations	42

## Human Development Overview

How children, youth, and adults develop and move from one stage of life to others has fascinated humankind since recorded time began. How do infants unable to communicate become teenagers who spend most of their waking hours on the phone with their friends? How do babies unable to crawl or walk become adults who jog and run marathons? Myths and folklore exist in all cultures to explain physical, cognitive, social, and emotional development, and in most, rituals mark the rites of passage from childhood to adulthood.

Over the years, several theories about development have evolved. Jean Piaget focused on how children develop their thought patterns and how they combine understanding to events in their environment, i.e. Cognitive Development. Erik Erikson centered on the stages of social and emotional development in children and adults. Arnold Gesell looked at patterns and phases of physical development in children. Lawrence Kohlberg was concerned with stages of moral development and how children and youth move from one level to another.

The primary emphasis in this unit is to provide staff members with an understanding of the flow and patterns of development in infants, toddlers, children, adolescents, and adults. A small amount of information is presented about the theories of Piaget, Erickson, and Kohlberg.

This module is divided into two parts. The first part will provide staff members with an overview of human development and typical sequences of development in infants, children, and youth. In the second part, trainees will learn about risk factors that may cause or impede typical development. It will also introduce the reader to the disabling conditions for which students can receive special education services.

## **UNIT I PRINCIPLES OF HUMAN DEVELOPMENT**

### **Instructional Objectives:**

Staff members will be able to:

- Explain why typical development in all children and youth follows predictable patterns.
- Explain what is meant by typical development in terms of:
  - a) cognitive growth,
  - b) physical/sensory growth,
  - c) social/emotional growth, and
  - d) language/communication development.
- Describe Piaget's Theory of Cognitive Development and its implications for individuals with disabilities.
- Describe the stages and characteristics of Erikson's theory of social/emotional development.
- Describe the levels and stages of the moral development theory.

### **Introduction**

In a training program for staff members working with children and youth with disabilities, trainees might wonder why they should learn about "normal" human development. Wouldn't it be enough just to learn about children and youth with disabilities and the factors that cause them and their families to require individualized education programs and services? In fact, wouldn't it be more useful and wouldn't it save time?

The fact is that children and youth with disabilities have more in common with their chronological age peers without disabilities than they have differences. In most ways, their behavior and patterns of development conform to the behavior and patterns of development of children and youth described as typical or "normal." They have the same physical needs, interests, joys, fears, and sorrows. Frequently the instructional interventions are the same for all children - disabled or not. Our expectations for children and youth with disabilities or who are at risk for other reasons should be the same as our expectations for all children: to grow and to develop to their maximum potential and to live and participate fully in the life of the community.

All infants, toddlers, young children, teenagers, and adults are individuals with many traits and characteristics that make us unique. The question invariably arises, if children and youth are so distinct, how can there be patterns of "normal" development? The answer is that although we do develop in our unique ways at our own pace, we also pass through certain predictable stages. Cognitive development in all children is dependent on previously learned information and experiences. In order to effectively function in the next stage, the individual must successfully experience the requirements of the present stage. Indeed, all people grow and develop in patterns and stages that may vary in the length of time required to complete each sequence, but the patterns are predictable from one person to another.

### **Stages of Development**

The observation of infants, young children, and youth forcefully demonstrates that everyone passes through

predictable stages in several areas including cognitive, physical/sensory, social/emotional, and language development. Because development is regular, patterned, and predictable, it is referred to as “normal” or typical. When children deviate from these “norms” they may require special services and individualized education programs.

Development is a step by step process. For example, learning to walk may involve as many as fifteen steps, beginning with pulling to a standing position and ending with walking without holding on. Most children progress through each step rather than skipping from step 1 to step 10. Because of these sequential patterns, determining a child’s or youth’s level of development is important so the child or youth can be assisted to reach the next step.

The terms “stages of development” and “characteristics of certain ages” are general. But to say the “average” four year old does certain things does not mean that every four year old acts in that manner.

Individual development in cognitive, physical, and social/emotional areas does not necessarily proceed evenly. One child (or adult) may be at a different chronological age for each area. It is likely, however, that the child (or youth) who is accelerated in one area will be advanced in other areas as well. Also, the child who is delayed in one area often is delayed in other areas as well. (An obvious exception is a person who has a physical disability who might, therefore, be delayed in acquiring physical skills but is not delayed in other areas.)

A second important concept is that development generally proceeds from the concrete and simple to the abstract and complex. For example, in cognitive development, children first become aware of (perceive) people, objects, or events. After that they progress to logical thinking and are able to sort things into categories, classes, and order. The next step in the sequence is problem solving and developing rules and guidelines for coping with the environment and society in general.

Finally, the acquisition of language is unique to humans and an important area of development. Language fills many important functions. It provides individuals with a means to communicate and socialize; it enables the transmission of culture from generation to generation; and it becomes a vehicle for thought. A baby, regardless of where s/he is born, is capable of producing every sound used in all languages used on the earth. The infant’s babbling encourages older persons to talk to the child, thereby teaching the infant the sounds used in the home environment. By six months of age, the sounds the child makes will be only those that s/he hears, and all other sounds are not made or practiced. In this way, humans learn to speak the language and the dialect that is spoken in the home where they are raised. It is also important to note that a child will understand language before s/he speaks it.

### **Basic Principles of Human Development**

1. Development in all people is similar. While every person is unique, development occurs in sequences that are predictable. For example, all babies sit alone before they walk.

2. Development is an orderly process with stages (patterns) that can be predicted. Knowing the predictable sequences of behavior helps in recognizing typical (“normal”), delayed, or accelerated patterns of behavioral change and growth and enables parents and educators to develop individualized programs.
3. Development proceeds from the general to the specific. For example, infants move their entire arm in a random manner before they can control it to pick up a toy.
4. Development proceeds from the upper portions of the body toward the lower portions - from head to toe. This “cephalocaudal” development means that children gain control of their head and neck movements before they are ready to sit alone.
5. Development proceeds from the center of the body to the outer body parts. Infants have better control over their body movements before they can accomplish finer manipulations of their fingers. This means children can pick up spoons before they can tie their shoes which is a finer manipulation.
6. Development proceeds at different rates. In a person’s developmental sequence there are periods of accelerated growth and gradual growth. From birth to age five, a child’s development is characterized by rapid physical and cognitive growth; from 5 to 11, physical development slows down; during adolescence, there is rapid physical growth again.
7. Development can proceed at different rates within an individual person. For example, a person may have delayed cognitive and language development and typical physical development.

## **Jean Piaget’s Theory of Development**

Piaget’s theory is mainly concerned with matters of intelligence, thinking, logic, language, and competence or efficiency. His approach views people as naturally active, seeking, adapting beings who learn through continual actions, which they initiate within their environment.

According to Piaget, a child is born with a set of sensorimotor operations/movements to perform upon his/her environment in order to “know” it and him/herself. As a result of these transactions and physiological maturation, the original sensorimotor operations are: 1) built into increasingly more complex patterns, 2) internalized so they can be carried out mentally, and 3) tied to language symbols.

For Piaget, mature behavior is the ability to reason and think critically, in objective, abstract, and hypothetical terms. When a youth or adult reaches this level, Piaget regards him/her as being at the peak of a developmental pyramid. Piaget hypothesized that each person progresses through four distinct stages of intellectual development. They are:

1. **Sensorimotor:** During the first two years of life, children receive information from their environment primarily through the senses and a multitude of physical motor explorations. The explorations provide information about ways to cope with different situations and the effect of behavior on the

environment. For example, an infant learns if s/he cries when s/he's hungry, s/he will be fed; s/he learns if s/he smiles, s/he gets a response from another person.

During this time the infant attains:

**Object permanence:** things continue to exist even when they are out of sight. For example, Dad has left for work but he will come back.

**Invariance despite change:** the identities of objects and people remain the same even in different contexts or circumstances. For example, the child may fold aluminum foil into many shapes but still realizes it is foil.

**Means-end:** certain acts result in reliable effects on the environment. For example, when you turn on the switch there will be light.

2. **Preoperational:** From three to seven years of age, children begin to expand their ability to think. This stage is divided into two substages.
  - a) **Preconceptual** - during the third and fourth years of life, children are constantly investigating their environment. They move from using their senses and motor abilities to understand the world to the ability to use mental symbols, words, or objects that stand for or represent something that is not present. A child who has learned the label, "dog", may initially label all four-legged animals "dog"; he gradually learns other appropriate labels for the animals, e.g. cat, cow, etc. Children in this period usually see themselves as the center of their environment.
  - b) **Intuitive** - During the ages four to seven, children begin to develop increased interest in their social world and demonstrate an ability to give reasons for their beliefs and actions. Their broader social interactions and their growing ability to use words effectively are important factors in contributing to their growth. For example, it is difficult for children under four years of age to take turns; they need to learn to experience "it's mine" before they can say "I want to share it with you." As children move into the intuitive period, they are able to share and take turns with others. They also learn to play cooperatively with other children; for example, two children, after listening to a story about firemen, may decide to build a fire station in the block corner. During this period of development: Thought is dominated by what is seen. The child is not able to attend to more than one thing at a time where space, time, volume, shape, and weight are concerned. Language development is very rapid. An average 3 year old has a vocabulary of 900 words, while an average 6 year old has 8 000 - 14 000 words.
3. **Concrete Operations:** From the ages of seven to eleven, children become capable of mentally seeing an object or event in a total system of interrelated parts; they understand that a ball of clay contains about the same amount of clay regardless if its a circle or a rectangle. They are also able to think about what happens to concrete objects without having to experiment with the object. For example, they recognize that a glass of water in a tall, thin glass seems to hold the same amount of water as a

glass of water in a short, fat glass, even though the containers have different shapes. During this stage of development: Logic and objectivity progressively characterize thoughts the child can reason, but only when using concrete objects the child learns multiple classifications and conservation; he learns conservation, equivalence (example  $A = B$ ), reversibility (example  $A = B, B = A$ ), and seriation (putting objects in series by following a pattern, such as sizes or constructing a hierarchy). For example, if you give a child different colored paper cut in various shapes - triangles, circles, etc. and sizes, he realizes that the papers can be grouped by color, shape, and size.

4. **Formal Operations:** By the time children are age twelve, their cognitive development is characterized by thinking and reasoning. They can think about issues and ideas; they can form opinions about abstract concepts like love, right, and wrong; they can understand the term "a million dollars" which must be thought of in abstract terms. Mental development is usually complete by the end of this period, around fifteen years of age. During this stage of development: Young people are able to formulate and execute symbolic plans of action based on hypothetical events, and can consider simultaneously more than one variable in the solution of a problem. They are able to imagine potential relations among objects or events. It must be remembered that the ages and competencies associated with these stages are approximations. In fact, some students without disabilities may never reach the formal operations stage.

### **Piaget's Cognitive Development Theory and Its Implications for Individuals with Intellectual Disabilities**

The stages described by Piaget are applicable to individuals with intellectual disabilities . Individuals with intellectual disabilities go through the developmental stages at a slower pace. The greater the degree of intellectual disability, the slower the rate of development.

Inhelder (1968) advanced a theory that put adults with intellectual disability on a continuum according to stages. According to Inhelder, individuals with severe and profound intellectual disability can be viewed as fixated or having stopped at the sensorimotor stage. Adults with moderate intellectual disability are considered to be incapable of surpassing the preoperational stage. Adults with mild intellectual disability are unable to progress beyond the concrete operational stage.

Piaget's theory provided an understanding of the condition of intellectual disability. Understanding the nature of the stages of development is essential for designing learning situations.

We learn by doing. Educators and direct service staff need to encourage individuals with intellectual disability to interact with the material to be mastered in a concrete way. We need to bear in mind that the majority of the individuals with intellectual disability are functioning at the concrete operational stage and operations such as adding, subtracting, substituting, multiplying, dividing, ordering, conserving, classifying, etc. can be mastered by these individuals when presented in a concrete form. New behaviors can be attained through task analysis and a step by step process.

## Erik Erikson's Theory of Social/Emotional Development

Erik Erikson developed a stage developmental theory of social development of children and adults. It focuses on how people see themselves and on their interactions with others. Erikson believed that social/emotional growth parallels physical growth. He described social/emotional development using a series of the eight stages listed below that extend from birth to death, with each stage building on the preceding one. The last three stages encompass the adult years.

1. Trust vs. Mistrust - 0-18 months
2. Autonomy vs. Shame and Guilt - 18 months - 3 years
3. Initiative vs. Guilt - 3-6 years
4. Industry vs. Inferiority - 6-11 years
5. Identity vs. Role confusion - 12 years - early adulthood
6. Intimacy vs. Isolation - Adulthood (young adults)
7. Generativity (producing) vs. Stagnation - Adulthood (middle-age adults)
8. Integrity vs. Despair - Adulthood (older adults)

STAGE	AGE LEVEL	CHARACTERISTICS
Trust vs. Mistrust	0-18 months	The ability of the infant to mistrust develop a sense of basic trust is the foundation of all personality development. The physical needs of infants must be met. As a result, a strong emotional bond is formed with the major caregiver, usually the mother; as an infant's need for food, warmth, and attention are met by a major caregiver, they develop a sense of trusting people in their environment that prepares them to accept new experiences.
Autonomy vs. Shame And Guilt	18 months - 3 years	As children test motor skills, (e.g. walking, running), they develop a growing sense of independence along with the ability to accept help and guidance from others. Attempts at independence may show up as tantrums or stubbornness; for example, a two-year-old may shout, "No!" to the question, "Do you want to go outside?", when in reality s/he really does want to play outdoors. This stage is often illustrated by a child becoming toilet trained, thus, developing a sense of autonomy.
Initiative vs. Guilt	3-6 years	Children become aware of their environment. They learn to broaden skills through the increasing use of imagination and fantasy. They begin to satisfy their natural feeling of curiosity. For example, children are interested in talking with new people and visiting new places.

STAGE	AGE LEVEL	CHARACTERISTICS
Industry vs. Inferiority	6-11 years	During this stage children begin to learn the values and skills of the environment. At school, they are expected to acquire the formal skills of reading, writing, math, and getting along with peers. They learn self-discipline to do homework. They learn to be industrious and ready to try out new skills.
Identity vs. Role confusion	12 years - Early adult-	Children are concerned with how they appear in the eyes of peers as well as finding out "who I am". The person develops specific skills and talents as well as meaningful goals and beliefs. As adolescents move toward finding their identity, they may seem "rebellious" to the family. Actually, it is progress.
Intimacy Vs. Isolation	Adulthood	Young adults begin to form meaningful relationships with other adults. Through pairings, the individuals learn the joys of shared intimacy and exploring life together, and may decide to have children.
Generativity vs. Stagnation	Adulthood (middle-age adults)	The adult continues to grow and develop socially. S/he is active member of society and learns to contribute to other members of society. More and more, couples are having children during these years rather than when they are younger.
Integrity vs. Despair	Adulthood (older adults)	The mature adult has experienced the preceding stages. Some people look back on their lives with satisfaction. Others are discontented. The resolution of this stage has a great deal to do with the individual's satisfaction with life as a whole.

## Moral Development

Piaget (1962) and Kohlberg (1969) both present theories of moral development based on a developmental model. Piaget basically outlined two major stages of moral development, the moral realism and ethics and mutual respect.

**Moral realism:** At this stage the child receives rules without understanding them and their reasons. The rules are considered sacred and should not be disobeyed. Punishment occurs when the rules are broken, regardless of intent or circumstances.

**Ethics and mutual respect:** In this stage, children are aware of the meaning of rules and the reasons for them. They understand that rules are changeable and that intent and motives are important.

Kohlberg expanded Piaget's two stages to six. Each stage reflects the cognitive development of the child. As his/her cognitive abilities become restructured through experiences, the child's view regarding moral behavior changes.

Level 1: Preconventional Morality (0-9 year of age)

Child does not understand the rules of society

Stage 1: Punishment-Obedience Orientation

Avoids punishments; Consequences determine goodness/badness of action.

Stage 2: Instrumental Relativist Orientation

Action is right if it satisfies one's needs.

Level 2: Conventional Morality (9-12 year of age)

Child conforms because there are rules

Stage 3: Good Boy/Nice Girl Orientation

Right action carried out to impress others.

Stage 4: Law and Order Orientation

Rules must be made and followed.

Level 3: Postconventional Orientation (some reach after 20 years)

Moral principles underlie rules of society.

Stage 5: Social Contract Orientation

Rules should be based on mutual agreement.

Stage 6: Conscience Orientation

Moral decisions should be based on self-chosen beliefs.

In order to examine how children's moral judgment develop, both Piaget and Kohlberg developed a series of stories such as the following (Kohlberg, 1969):

In Europe a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid \$200.00 for the radium and charged \$2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together \$1,000, which is half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So,

Heinz got desperate and broke into the man's store to steal the drug for his wife.

The individual's response to these stories indicates what level of moral development the individual is functioning at. While these levels are approximations they can give us an idea of the moral development of an individual.

### Childhood Moral Development

Level	Stage	Illustrative Responses to Story of Heinz Stealing the Drug
Level 1: Precon- ventional	Stage 1: Obedience and punishment orientation	It isn't really bad to take it -- he asked to pay for it first. He wouldn't do any other damage or take anything else and the drug he'd take is only worth \$200, he's not really taking a \$2000 drug.
	Stage 2: Instrumental relativist	Heinz isn't really doing any harm to the druggist, and he can always pay him back. If he doesn't want to lose his wife he should take the drug because it's the only thing that will work.

Level	Stage	Illustrative Responses to Story of Heinz Stealing the Drug
Level II: Conventional	Stage 3: Good-boy orientation	Stealing is bad, but this is a bad situation. Heinz isn't doing wrong in trying to save his wife. He has no level choice but to take the drug. He is only doing something that is natural for a good husband to do. You can't blame him for doing something out of love for his wife. You'd blame him if he didn't love his wife enough to save her.
	Stage 4: Law and order orientation	The druggist is leading a wrong kind of life if he just lets somebody die like that, so it's Heinz's duty to save her. But Heinz can't just go around breaking laws and let it go at that--he must pay the druggist back and he must take the punishment for stealing.
Level III: Post orientation	Stage 5: Social contract	Before you say stealing is wrong, you've got to really think about this whole situation. Of course, the conventional laws are quite clear about breaking into a store. And even worse, Heinz would know there were no legal grounds for his actions. Yet, I can see why it would be

reasonable for anybody in this situation to steal the drug.

Stage 6: Conscience  
Or Principled law  
Orientation

Where the choice must be made between disobeying a and saving a human life, the higher principle of preserving life makes it morally right--not just understandable--to steal the drug.

## Terms Used in the Study of Human Development

**Cognitive Development** - The process of acquiring knowledge and information as a person interacts with the environment and culture. Cognitive development depends on growth inside the person (such as the development of curiosity and the desire to learn as well as the impact of the outside environment).

**Communication** - Is the transmission of messages from one person to another. It may be accomplished in numerous ways including eye contact, posture, facial expressions, gestures, writing, and speech.

**Cooperative Play** - Reciprocal interaction during play with peers (putting a puzzle together with another).

**Development** - The growth of the person in predictable patterns.

**Developmental Delay** - A term used to describe an observed difference in a person's actual growth and behavior and the typical growth and behavior expected of people of the same age.

**Emotional Development** - The process in which the person acquires feelings about him/herself and other people.

**Physical Growth** - A term used to refer to an increase in size, height, weight, knowledge, and skills.

**Human Development** - A term used to refer to the study of a series of patterned and predictable changes that occur as a person grows and learns how to interact with the environment.

**Language** - Is the organized system of symbols people in various societies use to communicate with one another. These symbols may be spoken, written, or gestured.

**Learning** - The acquisition of knowledge and skills as children and youths interact with their environments, teachers, and caregivers. Learning is both receptive and expressive. Receptive learning is under the control of the learner who "takes in" or assimilates information about his/her environment and experiences. Expressive language is strongly tied to reinforcement provided by the learner's environment. For example, a person may know the concept - but not use the word unless their environment encourages the use.

**Maturation** - The growth of a person from within; the process of acquiring cognitive, social, emotional, and language skills that increase with age.

**Normal/Typical** - Averages or standards against which the behavior or development of a person is compared.

**Parallel Play** - Playing independently with a wide variety of materials in the close proximity of others.

**Physical/Motor Development** - The sequences or rate at which a person acquires motor skills and learns to control his or her body. It is characterized by changes seen in the external body and by unseen internal changes in the organs, muscles, blood, bones, and nervous system.

**Social Development** - The general process by which a person acquires the beliefs, skills, values, behavior patterns, and other characteristics considered necessary for interacting with other humans in a particular society/culture.

**Speech** - Speech is the organized production of sounds to form words and word groups.

## FEEDBACK EXERCISE I

### Listing

1. List at least five basic principles of human development.
  - a.
  - b.
  - c.
  - d.
  - e.
  
2. List the four distinct stages of intellectual development suggested by Piaget and some of their characteristics.
  - a.
  - b.
  - c.
  - d.
  
3. List the eight stages of social/emotional development as described by Erikson, as well as, one characteristic for each stage.
  - a.
  - b.
  - c.
  - d.
  - e.
  - f.
  - g.
  - h.

### Matching

4. Match the following characteristics of intellectual development with the four stages listed below.
  - (A) Sensorimotor
  - (B) Preoperational
  - (C) Concrete Operations
  - (D) Formal Operations
  1. \_\_\_\_\_ Things continue to exist even when they are out of sight.
  2. \_\_\_\_\_ They can think about issues and ideas.

3. \_\_\_\_\_ They can consider simultaneously more than one variable in the solution of a problem.
4. \_\_\_\_\_ During this stage, children receive information from their environment primarily through the senses.
5. \_\_\_\_\_ They are able to form and carry out symbolic plans based on hypothetical events.
6. \_\_\_\_\_ At this stage children usually see themselves as the center of their environment.
7. \_\_\_\_\_ They learn to play cooperatively with other children.
8. \_\_\_\_\_ Language development is very rapid.
9. \_\_\_\_\_ They receive information through a multitude of physical motor explorations.
10. \_\_\_\_\_ They understand that a ball of clay contains about the same of amount of clay regardless if it is a circle or a rectangle.

5. Match the following stages with the levels of intellectual disability.

- (A) Sensorimotor
- (B) Preoperational
- (C) Concrete Operations
- (D) Formal Operations

1. \_\_\_\_\_ Individuals with moderate intellectual disability.
2. \_\_\_\_\_ Individuals with mild intellectual disability.
3. \_\_\_\_\_ Individuals with severe and profound intellectual disability.

6. **True/False**

- | True     | False |   |
|----------|-------|---|
| 1. _____ | _____ | Children and youth have more in common with their chronological age peers with disabilities than they have differences. |
| 2. _____ | _____ | Development proceeds from the abstract and complex to the concrete and simple.  |
| 3. _____ | _____ | The acquisition of language is unique to humans.  |
| 4. _____ | _____ | A baby, regardless of where s/he is born, is capable of producing every sound used in all languages on the earth.       |
| 5. _____ | _____ | Majority of individuals with intellectual disability are functioning at the concrete operational stage.                 |

## UNIT II -DEVELOPMENTAL STAGES AND PATTERNS OF BEHAVIOR

### Instructional Objectives:

Staff members will be able to:

- Describe characteristics of infants and young children at each year from birth to five.
- Explain typical sequences of development in elementary school age children.
- Discuss the major physical, intellectual, emotional, and social changes which occur during adolescence.
- Demonstrate a familiarity with the changes and the challenges that occur in adulthood.

### The Age of Dependence - Birth to 24 months

This is the time of greatest growth in children. They go from being dependent on parents for food, movement, and stimulation to being able to control these things themselves. By the end of this age, they can walk and climb alone; tell caregivers what they want; feed themselves; and entertain themselves for short periods of time. This is a time of self-centeredness and increasing independence. Children of this age are not selfish; rather they can only see the world from their own view point. The world is what they can do to it. The world is action and making things happen. The skills developed during this time are the foundation for all later development. The skills learned can be divided into three broad categories. These categories are interactions, communication, and self-help.

#### Interactions

Interactions include all the skills children need in order to know how to act with family, friends, and other people. Included are skills related to how to use toys and other objects in the environment. If children learn these skills, they can play appropriately alone as well as with others. Children need to use them at home, in school, and in wide variety of other places (e.g., grandma's house, the playground, the grocery store, and the babysitter's house). The skills that help determine how children are able to interact are gross motor, fine motor, communication, cognitive, and social skills.

Gross motor skills involve coordinated usage of large muscle groups in the body. The development of gross motor skills will enable children to have smoother, more effective body movements and increase the child's sense of spatial orientation (where they are in relation to other objects) and body awareness.

Some of the gross motor activities that gross motor skills are utilized with include: walking, jumping jacks, hopping, skipping, kicking a ball, and various physical game skills. By performing the same movements and playing the same games as other children, interaction is increased.

Fine motor skills involve the efficient usage of individual or smaller groups of muscles in order to perform more precise motor movements. These skills are more challenging to students and will require more practice and repetition than the gross motor activities. The fine motor skills needed for interaction with others are

considered pre-academic or academic in nature.

The fine motor skills include: all forms of paper pencil tasks, (making and stapling letters and numbers, scissor cutting, tying shoes, playing catch, and playing jacks). These can be done individually, but the skills will be useful when interacting with peers as well.

### **Communications**

Communication includes all the skills necessary for children to understand the language used by the people around them as well as the skills necessary for children to use language themselves. Included are skills which are needed for talking and also for signing or using a picture communication system. Other skills involved in the area of communication are cognitive, interaction and motor areas of development. Sometimes a child will talk more in some situations than others. For example, many children will use more language at home than they will when they first start in a classroom. Often children will “clam up” around strangers or when requested to show that they know a word or phrase. Because of the difficulty in getting children to use their language skills in new environments, input from parents, babysitters, grandparents, etc., as to what the child really can do is very important.

### **Self-Help**

Self-help includes the skills necessary for children to feed, dress, and bathe themselves. They are the skills that decrease a child’s dependence on parents and caregivers and decrease the amount of time required for physical caregiving. Professionals sometimes refer to this as the burden of care because of how tiring performing these activities can be for parents. Skills from gross motor, fine motor, and cognitive are all involved in performing self-help activities.

### **Age of Exploring - 24 to 36 Months**

This age is one of many changes for a child. Children at the beginning (24 months) are very different when compared to the end of this age (36 months). It is a time for practicing skills that a child has learned earlier and to become more “grown-up.” They are now learning when and where to use these skills. Children continue to need help from their family, neighbors, and others in the environment to learn how to use these new skills to interact and communicate in more complex ways. They may seem like babies at times and more like independent children at other times. For example, they may want help from others to wash their hands or play a game at a certain time and twenty minutes later they want no help to do these same tasks. Sometimes, this makes understanding what a child wants very difficult for care-givers. By the end of this age, however, the child has mastered many more skills and language, so that they become a talker and explainer as well as a doer. Children accomplish these skills through interaction, communication, and self-help experiences.

## **Interactions**

Interactions include skills needed for a child to know how to act with other children, family, and other familiar and unfamiliar adults. Children also learn how to use objects, materials, and toys in their environment. This includes the child knowing what to do when they are alone, so that they can play by themselves. Children learn how to begin interactions and how to respond to others once the interactions begin. There will be times when these interactions are quiet activities such as reading a book, playing with trucks and cars, or drawing a picture with crayons. There will be times when these interactions are very active, like running and screaming, climbing on the furniture and jumping off, or riding a bike. Children will spend more time in active play at the beginning of this age (24 months) and more time in quiet play at the end of this age (36 months).

## **Communications**

The skills in this area include those involved in talking, signing, using a picture communication system, and understanding what is meant when adults and peers talk with the child. The skills in these systems include the cognitive, interaction, and motor areas of development. During the 2 to 3 year age range, children may not be learning a lot of new words, but they are putting together the words they know and making longer and more complicated sentences. They are longer and more complicated from the perspective of what they say, and children understand longer and more complicated sentences that are said to them. Children of this age are beginning to use their communication system to be as independent as their motor system allows them to be. For example, they will sometimes ask others to get objects for them or to perform specific actions, rather than do them for themselves. This does not always happen, as they sometimes ask for an object while they are getting it for themselves.

## **Self-Help**

The skills in this area include feeding, dressing, going to the bathroom, and bathing. These routines include component skills of gross motor, fine motor, communication, cognition, and interaction. Two to three year old children are learning how to use these skills to finish each routine, but sometimes they want to play during these routines. They want to do them at their own pace and they want to make the choice of when and how to do each routine. Many times they use their skills during these routines to be independent from what others around them want them to do. They want to experiment and try combinations of new skills during these routines, such as drinking their juice by dipping from their glass with a spoon.

## **Pre-School Children Ages 3-5**

### **Physical Development**

During this period of time the rate of physical growth begins to slow down. Children begin to play with toys that can be manipulated. For example, they enjoy playing with clay, driving nails and pegs, and building towers using small blocks. They can walk on a line, hop on one foot, and ride and steer a tricycle.

## **Social, Emotional, and Cognitive Development**

Piaget identifies children in this age range as “preoperational.” They always seem to be on the go, exploring and learning about their world. At the same time they are seeking independence; they are also forming strong attachments with caregivers and require a great deal of attention and support from adults. Their attention spans are short and they can be easily diverted.

They learn by observing adults and their peers. While they are self-centered, children between the ages of 3 and 5 also need the companionship and to be able to play with children the same age. They begin to learn to take turns and share, and they move from parallel play (playing independently in the proximity of others) to cooperative play (reciprocal interaction during play with peers). They are interested in talking to new people and visiting new places. And they begin to expand skills through the increasing use of imaginative and satisfying their curiosity.

## **Early Elementary Children Ages 5-8**

### **Physical Development**

The rate of growth continues to be relatively slow, providing children with an opportunity to develop greater coordination in both gross and fine motor areas. They learn to skip, skate, ride two-wheel bikes, walk balance beams, grasp a pencil in an adult manner, move beyond cutting straight lines to cutting out simple shapes, and the predominant hand is established for writing and eating.

### **Social, Emotional Development**

While children are learning to get along well with their peers, they are also sensitive to being left out, ridicule, and criticism. Developing, following, and playing by the rules becomes very important. They begin to understand the values of their culture/environment and they like to try out the skills they are learning in many settings. The children in this age group identify strongly with their teachers and other adults: encouragement, recognition, praise, and adult support are very important. They also need time to adjust to new experiences and situations.

### **Cognitive Development**

In school, children ages five to eight are learning basic academic skills - reading, writing, and arithmetic. They are interested in learning how and why things move or work. Their attention spans remain short and they need time to practice what they are learning.

## **Late Childhood/Pre-Adolescence Ages 8-11**

### **Physical Development**

This stage of development is sometimes referred to as Pubescence. It is an overlapping period because it includes the closing years of childhood and the beginning years of adolescence. Pubescence is climaxed by puberty when girls begin to menstruate and boys show the presence of live sperm. It is marked by slow and steady growth. Both girls and boys need opportunities to improve the coordination of their large and small muscles and they require plenty of sleep and well balanced meals.

### **Social, Emotional Development**

Children in this age range are enthusiastic about almost everything. They are imaginative and like to explore. Peer group approval becomes increasingly important. They are interested in organized games and competitive activities. Children this age are frequently socially insecure, but value secure, supportive relationships with adults.

### **Cognitive Development**

At this stage of their development, children enjoy talking and expressing abstract ideas. They like to experiment and solve problems and are eager to acquire new skills. Language usage is influenced by their peers and oriented to shared interests among peers.

## **Adolescence**

### **Physical Development**

“Adolescence” is derived from the Latin verb that means to grow into maturity. It is the period of change in a person’s life that signifies transition from childhood to adulthood. It is characterized by rapid growth and marked changes in body proportions. Changes may begin and end any time between 6 and 19. Primary sex characteristics develop and in girls, reproductive organs mature. Secondary sex characteristics including marked changes in the voice, development of underarm, facial and pubic hair begins in early adolescence; chest hair does not appear until late adolescence. Breast development is observed in girls during adolescence.

Rapid growth and bodily changes are likely to be accompanied by a period of fatigue, both girls and boys may experience cramps, swelling of legs and ankles, and acne may develop.

### **Emotional, Social Development**

There is a definite relationship between physical development and the ways adolescents perceive themselves. It is not uncommon for many adolescents to experience feelings of self-consciousness, shyness,

and insecurity because of the sexual changes taking place. Adolescent emotions are often intense, uncontrolled, and seemingly irrational. Throughout adolescence, emotional maturity grows as individuals develop more self-control over their emotional responses. During this period, the peer group influences young people more than any other factor. They become less dependent on their family and try to achieve independence and autonomy. As the dependence on the home lessens, security is found among friends who share the same values and attitudes.

### **Cognitive Development**

Cognitively, adolescents are able to shift from concrete to abstract thinking. They develop the ability to test tentative hypotheses against available evidence. Moral development matures during adolescents and young people begin to find their own moral principles rather than adapting those of their parents without question. Adolescents begin to develop specific skills and talents and start to set goals for themselves.

### **Adulthood and Aging**

Physical and mental changes occur throughout a person's life. Following adolescence, a period of tremendous change, the adult years seem to be relatively calm. Aging is a slow process that is often difficult to recognize until certain milestones occur. Similar to infancy, adult developmental milestones may be associated with specific ages. However, there is wide variation in the attainment of these milestones. "Old age" has many definitions. Our mores reflect this, as evidenced by the "senior citizens discounts" available at varying ages. However, retirement usually occurs between ages 62 and 65, the time when Social Security benefits are available.

### **Aspects of Aging**

Some may be considered positive and include:

- decreased family responsibilities
- more free time to pursue hobbies
- freedom from jobs that may have been anxiety producing

Some may be considered challenging and include:

- loss of loved one or same-aged friends
- medical difficulties
- sensory loss

Each of us know people who are elderly. We also have a lot of ideas about what it means to be "old," many of which are negative. Aging does not have to be sad or bad. The perceptions of others often define it and older adults respond to these social cues. Not all things about the later years of life are disheartening. For many

older Americans, it is the first time in their lives that the responsibilities placed upon them by society and family diminish, and they can look forward to enjoying life for themselves. This, of course, may not be true for everyone. There are people who retire “well”, and those who don’t. A healthy, rewarding retirement is related to the individual’s expectations and values as well as to the people and the environment surrounding the person. This transition from a working, responsible individual to a person whose life is unstructured affects each person differently. If the person has hobbies, friends, plans, and considers him/herself financially stable, the transition may be smooth. In other cases, the transition may be more difficult. (See “Aging and Developmental Disabilities” module for more information).

## FEEDBACK EXERCISE II

1. Matching (Match the developmental stages with the patterns of behavior).

- (A) Age of Dependence - birth to 24 months
- (B) Age of Exploring - 24 to 36 months
- (C) Preschool children - ages 3 to 5
- (D) Early elementary children - ages 5 to 8
- (E) Late childhood Pre-adolescent - ages 8 to 11
- (F) Adolescence

- 1. \_\_\_\_\_ During this period, children begin to play with toys that can be manipulated (clay, blocks, etc.).
- 2. \_\_\_\_\_ This is the time for greatest growth in children.
- 3. \_\_\_\_\_ Children will spend more time in active play at the beginning of this age and more time in quiet play at the end of this age.
- 4. \_\_\_\_\_ Children at this age are not selfish, rather they can see the world from their own viewpoint.
- 5. \_\_\_\_\_ They move from parallel play to cooperative play.
- 6. \_\_\_\_\_ They are beginning to put words together for longer and more complicated sentences.
- 7. \_\_\_\_\_ Peer group approval becomes increasingly important.
- 8. \_\_\_\_\_ It is characterized by rapid growth and marked changes in body proportions.
- 9. \_\_\_\_\_ Children at this developmental stage are learning basic academic skills - reading, writing, and arithmetic.
- 10. \_\_\_\_\_ They are interested in organized games and competitive activities.
- 11. \_\_\_\_\_ They learn to skip, skate, ride a two-wheel bike, walk a balance beam, and hold a pencil.
- 12. \_\_\_\_\_ They are able to shift from concrete to abstract thinking.
- 13. \_\_\_\_\_ They become less dependent on their family and try to achieve independence and autonomy.
- 14. \_\_\_\_\_ Predominant hand is established.
- 15. \_\_\_\_\_ During this period, peer groups influence young people more than any other factor.

2. Listing

List at least three positive aspects of aging.

(a)

(b)

(c)

3. List some aspects of aging that can be challenging.

(a)

(b)

(c)

## **UNIT III - FACTORS THAT CAUSE OR IMPEDE TYPICAL HUMAN DEVELOPMENT**

### **Instructional Objectives**

The staff member will be able to:

- Discuss various disabilities and their impact on the educational needs of children and youth.
- Experience (through simulations) and discuss the effects of several categories of disabilities on the learner.

### **Factors That Cause or Impede Human Development**

The previous section in this module dealt with the stages of human growth that are typical for most people. This unit focuses on causes and categories of disabilities. Since definitions for various types and levels of disabilities vary from state to state, this background information is very general. It should be used to supplement the definitions and regulations connected with service delivery in your community, and to develop an outline for the training session.

### **Causes of Disabilities**

There are several factors that may lead to a child having developmental as well as other disabilities. They may be genetic or they may be environmental, and they may occur during prenatal (before birth), perinatal (during birth), or postnatal (after birth) periods.

#### **Genetic Factors**

Physical and other characteristics for all people are shaped by our genes. They determine whether we are tall or short, bald or have brown or red hair, the color of our eyes, and more. Sometimes disabilities and other conditions are inherited as a result of the genes that exist in our parents. Many times a child's parents do not have the disability. Genes may be carried from earlier generations. Genetic causes may produce mild or severe disabilities that may or may not be life threatening. Examples of genetically, but not necessarily inherited, caused disorders are Down Syndrome, and Hemophilia.

#### **Environmental Factors**

Sometimes circumstances in a child's environment may cause the child to have a disability. Toxins in the air, water pollution, lead poisoning, and poor nutrition are other factors that have an impact on a child's environment and may lead to a disability. For example, a child's family may have economical or other disadvantages that make it difficult for them to provide experiences that stimulate or encourage learning. Disabilities may be caused by a condition that existed before birth, an event that occurred during birth, or an accident or trauma that happened after birth.

**Prenatal** simply means before birth. Many disabilities are the result of something happening to the fetus while it is still in the mother's womb. If the mother has poor nutrition, has hepatitis or measles, uses drugs, alcohol, or smokes her child might be born with a disability. Other factors that have been linked to these conditions include: certain medicines taken during pregnancy and food additives.

**Natal** means at the time of birth. Some disabilities result from conditions present at the time of birth. Being born prematurely, having a loss of oxygen, long labor, excessive hemorrhaging or loss of blood from the mother, early separation of the placenta (the part of the tissue that is attached to the womb), and direct injury to the baby's head, if instruments are used, are some events during the birth process that may cause disabilities.

**Postnatal** means after birth. In some cases children or youth become disabled after birth. Injury to the central nervous system may happen in many ways including severe blows to the head as a result of an accident or child abuse, the inability to breathe, poisoning, tumors, and infectious diseases such as meningitis or encephalitis.

## **Categories of Disabilities**

The federal and North Dakota guidelines indicate thirteen (13) distinct categories of disabilities eligible for special education services. A common theme throughout the classifications is that these conditions create difficulty for the students in educational performance.

The categories, while separately defined, may affect many different areas in an individual's life. The conditions can be placed in five (5) primary groups of disabilities: Intellectual, Sensory Communication, Behavioral, and Physical/Medical and Other Health Related Problems. These are described in greater detail in the Orientation Module.

### **A. Intellectual**

#### **Intellectual Disability**

Children or adolescents with intellectual disability tend to learn more slowly than their peers in the areas of social interactions, cognitive growth, and motor development. They may also have difficulties learning things other people take for granted, like knowing their age, their address, dressing themselves, and other activities of daily living.

Three characteristics must be present for a diagnosis of intellectual disability to be made. They include:

- Significant subaverage intellectual functioning
- Limitations in adaptive behavior
- Occurrence before age 18

At the American Association on Mental Retardation's (now named American Association on Intellectual and Developmental Disabilities) annual conference in New Orleans, LA, May 30, 1992, the following definition on intellectual disability was forwarded and accepted. It intended to change the way people with intellectual disability are viewed, and also alter the way supports for these individuals are chosen.

“Mental retardation refers to substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18.

In order for this definition to be applicable to the field, certain assumptions are essential:

- (1) Valid assessment must be conducted taking into account cultural, linguistic, communicative, and behavioral factors specific to the individual being assessed;
- (2) That adaptive skill limitations occur within the community environment typical of the individual's same age peers, and is indexed to the individual's need of or support;
- (3) Individual limitations will often be accompanied by strengths in other adaptive areas; and
- (4) With appropriate supports over a sustained period of time, the life functioning of the person will improve.

Marc Gold (1980)\* developed a different definition of intellectual disability.

He suggested that the level of intellectual disability is defined by the amount of power necessary for the educational personnel to use to teach that person. In other words, Gold's definition indicates that the educators are as important as the learner. If the teacher does not have the skills to assist a person in learning, then that individual is usually considered to be mentally retarded.

Gold's definition is important because all the tools and strategies for teaching people labeled as mentally retarded have not yet been developed. As new and improved techniques are developed for teaching children or adolescents who have been perceived as difficult to teach, teaching may seem to be easier and produce unexpected results.

Before this, many persons with intellectual disabilities were thought to be unteachable or capable of learning only minimal self-help skills. Today, the same persons are performing academic skills to a greater or lesser degree, and are participating in community activities. This is due primarily to the fact that the teaching skills of professionals and staff members who work with people with intellectual disability have become more sophisticated and effective.

In 2010, AAIDD adopted the following definition: (Source: [http://www.aidd.org/content\\_100.cfm?navID=21](http://www.aidd.org/content_100.cfm?navID=21))

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

Intellectual functioning—also called intelligence—refers to general mental capacity, such as learning, reasoning, problem solving, and so on.

One criterion to measure intellectual functioning is an IQ test. Generally, an IQ test score of around 70 or as high as 75 indicates a limitation in intellectual functioning.

Standardized tests can also determine limitations in adaptive behavior, which comprises three skill types:

- Conceptual skills—language and literacy; money, time, and number concepts; and self-direction.
- Social skills—interpersonal skills, social responsibility, self-esteem, gullibility, naïveté (i.e., wariness), social problem solving, and the ability to follow rules/obey laws and to avoid being victimized.
- Practical skills—activities of daily living (personal care), occupational skills, healthcare, travel/transportation, schedules/routines, safety, use of money, use of the telephone.

On the basis of such many-sided evaluations, professionals can determine whether an individual has an intellectual disability and can tailor a support plan for each individual.

But in defining and assessing intellectual disability, the American Association on Intellectual and Developmental Disabilities (AAIDD) stresses that professionals must take additional factors into account, such as the community environment typical of the individual's peers and culture. Professionals should also consider linguistic diversity and cultural differences in the way people communicate, move, and behave.

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

### **Specific Learning Disabilities**

Learning disabilities is a unique disability that affects the academic functioning of many school children, as well as adults. Due to the difficulties in pinpointing exactly what a learning disability is, a number of definitions have been established. One of the most widely accepted is:

“Learning disabilities is a generic term that refers to a heterogeneous (unique to the individual) group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic (not caused by external sources) to the individual, and presumed to be due to central nervous system dysfunction, and may appear across the entire life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with a learning disability, but do not themselves constitute a learning disability. Although learning disabilities may occur concomitantly (at the same

time) with other handicapping conditions (sensory impairment, speech and language disorder) or with external influences (cultural, economic or social differences) they are not the result of those conditions or influences. (National Joint Committee on LD, 1989)

Common themes in defining a learning disability that have come from research and practice include:

- The cause of a learning disability is believed to be due to some form of central nervous system dysfunction.
- The individuals have an uneven growth pattern; some strengths and some weaknesses.
- Average or above average intelligence
- Major discrepancy between potential (IQ) and achievement.
- Exclusion of other factors as the primary cause of the problem.

Students with learning disabilities may have many labels: neurological impairment, minimal brain dysfunction, brain damage, dyslexia, or attention deficit disorder. A person who has a learning disability may have: difficulty in visual perception, but is not blind (may not see a circle as perfectly round), or is unable to see specific parts of a figure or word; difficulty in auditory perception (hearing things as others hear them), but is not deaf; difficulty in motor movements (walking, moving arms and fingers), but is not physically handicapped; and difficulty with cognitive learning (classifying things, ordering things and ideas), but is not retarded. Students with learning disabilities have average or above average intelligence. They may display a wide range of behaviors that may include difficulty in monitoring and maintaining control of their behavior, hyperactivity, distractibility, impulsiveness, and preservation.

## **B) Behavioral**

### **Serious Emotional Disturbance (SED)**

Children and youth with challenging behaviors demonstrate a wide range of ways of dealing with the world, including “withdrawing” from it and “acting out” upon it. Many develop methods for coping with everyday living that are self-defeating and non-productive. The primary difference, between children and youth with severe emotional disturbance and their peers is in the degree to which they are able to monitor, control, or change their patterns of behavior.

SED, as defined in PL 94-142, involves a condition exhibiting one or more of the following characteristics over a long period of time, and to a marked degree which adversely affects educational performance:

- Inability to learn which can't be explained by intellectual, sensory, or health factors.
- Inability to develop or maintain friendships with peers or teachers.
- Inappropriate display of behavior under otherwise normal conditions.
- An ongoing unhappy or depressed mood.
- Development of physical symptoms or fears associated with personal or school problems.

Students who are withdrawn may find security by building walls around themselves. They may have had experiences early in life that cause them to believe that it is not safe to express their real feelings to other people.

Children or adolescents who act out may appear to have more control over their behavior than they actually do. As a result, others interpret their actions as being deliberately vengeful, or deliberately provocative; doing something just to get even or setting up a situation that will lead to conflict. Most people look upon these behaviors as “disturbing”. People who act out their emotions, unlike those who are withdrawn, defend themselves by acting out their feelings with impulsive, and often explosive, immediate reactions. They find it difficult to deal with frustration - or to postpone immediate gratification of needs - “I want it, and I want it now.”

The term severe emotional disability is most often used to describe the behaviors of children and youth who have been diagnosed as having schizophrenia, autism, or other forms of emotional disabilities that interfere with their ability to learn, to interact, and maintain friendships with their peers and their family relations.

A very critical factor in referrals for and diagnosis of SED is the student’s teacher. The factors utilized in making an SED diagnosis is subjective (judgmental) in nature and will rely on the teacher’s beliefs as to what constitutes a behavioral problem. What one teacher views as rambunctious another may view as psychotic. While behavior rating scales and checklists are used to rank the behaviors, the teacher’s views will still be vital as to determination.

## **Autism**

Autism is another separate disabling condition under the behavioral domain, although it includes negative communicative and health characteristics as well. Autism is a severe behavior disorder usually characterized by extreme withdrawal and lack of language and communicative skills. Characteristics include

- Apparent sensory deficit: appears the child cannot see or hear things in their environment.
- Severe affect isolation: a profound lack of interest to affection shown by others.
- Self-stimulation: engages in repetitive, stereotypical movements such as rocking, humming, etc.
- Tantrums and self-mutilating behavior: biting, hitting, etc. of self or others.
- Echolalic and psychotic speech: autistic individuals may have little or no communication abilities.

Often they will repeat what they hear in parrot-like fashion, immediately or after a delayed period of time.

- Behavior Deficiencies: many of the behaviors autistic children portray are at a lower age range than their chronological age.

## **C. Communication**

### **Speech or Language Impairment**

People who are diagnosed as having speech or language limitations demonstrate a variety of symptoms which represent many causes that may be physiological or environmental. Speech and language skills are naturally acquired by most children. When the ability to formulate speech sounds into understandable communication is impaired, there is a need to teach a child these skills. The ability to receive, transmit, and understand language for communication, language development, may also be delayed. Other problems may stem from “mis-articulations”, where sounds are substituted for others, left out, or distorted, or the child may stutter or lisp. Language disabilities may also include difficulty in communication because of a lack of vocabulary or improper grammatical structures.

## **D) Sensory Impairments**

### **Visual Impairment including Blindness**

People who have a visual disability usually have some degree of useful sight. Only a small percentage are blind. Even many legally blind students (20/200 or worse in their better eye with correction; or less than a 20% range of peripheral vision) have useful vision. It has been noted that more people are “blinded” by definition than by any other cause. Most school districts categorize students who must read and write in braille as blind. Students who are partially sighted or have low vision are those with enough useful sight to enable them to read either standard or enlarged print. More severe degrees of visual disabilities may result in problems with physical mobility or motor development. People with various degrees of visual disabilities are able to take care of themselves and live and work independently.

### **Deafness and Hearing Impairment**

There are two dimensions to the sense of hearing. They are: the intensity or loudness of sound (decibels) and the clarity with which sound is received (frequencies). People with hearing loss may have problems with the loudness of sound, or the distortion/clarity of sound, or a combination of both. Language development and communication are the biggest challenges confronting people with hearing impairments. Depending on the degree and type of hearing loss, there are a variety of techniques currently available to assist people to develop skills in these sound amplification areas. They are: auditory training (listening skills), speech reading (lip reading), finger spelling and sign language, and written and visual presentations. Using a combination of all methods is referred to as “total communication”.

### **Deaf-blindness**

Deaf-blindness means that both disabling conditions are affecting the child at the same time. The hearing and vision impairments are of such a severe nature that the student’s educational needs can’t be dealt with solely

in one or the other special education programs.

## **E) Physical, Medical and Other Health Related Problems**

As early intervention/childhood programs and school districts implement programs for all children and youth with disabilities, without regard to the nature or severity of the disabilities, they are increasingly providing services to children who are at-risk because they are medically fragile. Many of these students require specialized health care while they attend classes.

The level of performance and participation in the activities of life can be affected because a person has limited strength, vitality, or alertness caused by a chronic or acute health problem. Heart conditions, tuberculosis, rheumatic fever, nephritis, asthma, AIDS, hemophilia, sickle cell anemia, leukemia, diabetes, and arthritis are some of the more noted illnesses that paraeducators may be involved with.

Individuals with illnesses that are diagnosed as being terminal present special challenges for personnel. The death of someone they have known and worked with is difficult under any circumstances. It is particularly difficult for staff members who must cope with their own feelings, as well as helping others to understand and accept the death.

### **Multiple Disabilities**

This condition includes two or more disabling conditions occurring together (i.e. LD and blindness) that result in more programming than could be provided in any one special education program. Individual education plans will need to be developed with the amount and severity of the multiple disabilities being addressed. Coordination between the various programs providing services is a very important component of a successful program for a student with multiple disabilities.

### **Orthopedic Impairment**

This area involves any disability to the musculoskeletal systems that adversely affects a child's functional abilities. Discussed here are a few of the more common physical disabilities. Cerebral palsy is a disability that impairs the motor system. The impact on a child's ability to be independent can be minimal or it may be so severe that the person may have little muscular control and may need assistance with eating, dressing, and to use a wheelchair or other adaptive equipment. Spinal cord injury is a disability resulting in paralysis of one or more limbs and the trunk of the body. These injuries may occur at birth, as in the case of spina bifida, or as the result of an accident.

There are other disabilities that may tend to restrict physical activity such as skeletal deformities or amputations, rheumatoid arthritis, muscular dystrophy, and heart disease.

Some children and youth with physical and motor disabilities may also have intellectual disability, learning

disabilities, speech limitations, or vision and hearing loss. Most do not. The biggest educational challenge for them is that their parents and the education workforce is developing ways they can actively explore their environment and participate in activities in and out of school.

## **Other Health Impairment**

Many conditions can affect a child's health, which in turn may alter their school performance and social acceptance. Most of these conditions are referred to as chronic; that is, they are present over a long period of time and tend not to get better or disappear.

Epilepsy, a convulsive disorder, is a condition where the person has involuntary lapses of consciousness which may last for a few seconds or may result in a major convulsion with motor movements. With proper medical treatment and team support, many children with convulsive disorders can function effectively.

Other health impairments that paraprofessionals need to be aware of include:

- Diabetes: an inability of the pancreas to process sugar which may result in complications to the child's health and functioning.
- Asthma: chronic lung disease that affects the breathing rate of the child. Medication and elimination of the stimuli that cause attacks (smoke, cold air, etc.) are treatments.
- Cystic Fibrosis: a chronic respiratory and excretory condition caused by glandular dysfunctions. Symptoms include mucus build-up in the lungs and bowel difficulties due to lack of complete digestion of food in the body.
- Also includes: Hemophilia (a condition where the blood fails to clot), severe burns, and AIDS

## **Traumatic Brain Injury**

Traumatic brain injury involves an acquired injury to the brain caused by some external physical force that results in total or partial functional disability or psychosocial impairment. This disabling condition can be caused by an open or closed head injury resulting in impairments in cognition, language, memory, attention etc. This condition does not include brain injury that is present at birth.

In summary, each of these disabling conditions will be accompanied by characteristics that will affect educational performance. However, the degree to which these disabilities will delay normal development will be different with each individual. Program planning, implementation, and educational delivery approaches will have to be designed based on the individual characteristics of the student.

### FEEDBACK EXERCISE III

#### Listing

1. List at least three environmental factors that can cause disabilities.

- (a)
- (b)
- (c)

2. Many disabilities are the result of something happening to the fetus while it is still in the mother's womb. List at least four of those causes.

- (a)
- (b)
- (c)
- (d)

3. Some disabilities result from conditions present at the time of birth. List at least four of those conditions.

- (a)
- (b)
- (c)
- (d)

4. In some cases children acquire disabilities after birth. List at least three of these cases.

- (a)
- (b)
- (c)

5. List the three characteristics that must be present for an intellectual disability diagnosis as defined by the AAIDD).

- (a)
- (b)
- (c)

6. Marc Gold developed a different definition from the AAMR (now AAIDD definition. Describe Gold's definition and compare it with the AAMR (now AAIDD) definition.

7. Fill in the Blanks

Causes of disabilities may be \_\_\_\_\_ or they may be \_\_\_\_\_.

Causes may occur during the \_\_\_\_\_, \_\_\_\_\_, or \_\_\_\_\_ periods.

8. List 5 of the adaptive skill areas individuals with intellectual disability may be limited in:

- (a)
- (b)
- (c)
- (d)
- (e)

9. What are five 5 common themes in defining a learning disability?

- (a)
- (b)
- (c)
- (d)
- (e)

10. The primary difference between children with a serious emotional disturbance and their peers is:

11. List at least four techniques to assist persons developing hearing skills.

- (a)
- (b)
- (c)
- (d)

12. True/False

True      False

\_\_\_\_\_      \_\_\_\_\_ People with learning disabilities may have average or above average intelligence.

\_\_\_\_\_      \_\_\_\_\_ Only a small percentage of people are blind.

\_\_\_\_\_      \_\_\_\_\_ People with various degrees of visual disabilities are unable to take care of themselves and live and work independently.

## FEEDBACK EXERCISE

- 1. List at least five basic principles of human development**
  - a. Development in all people is similar
  - b. Development in an orderly process with stages (patterns) that can be predicted
  - c. Development proceeds from the general to the specific.
  - d. Development proceeds from the upper portions of the body toward the lower portions – from head to toe. Development proceeds from the center of the body to the outer parts
  - e. Development proceeds at different rates.
  - f. Development can proceed at different rates within an individual person.
  - g. Physical, cognitive, and emotional development are interrelated and affected by the intersection of heredity and environment.
- 2. List the four distinct stages of intellectual development suggested by Piaget and some of their characteristics.**
  - a. Sensorimotor – sensory and physical motor explorations of the environment
  - b. Preoperational – move from using their senses and motor abilities to use mental symbols, words, or objects. Language development is very rapid.
  - c. Concrete operations – logic and objectivity when using concrete objects. Children learn classification, equivalence and seriation.
  - d. Formal operations – children can think about issues and ideas and form opinions about abstract concepts like love, right, and wrong.
- 3. List the eight stages of social/emotional development as described by Erikson, as well as, one characteristic for each stage.**
  - a. Trust vs mistrust- strong emotional bond is formed with a major caregiver, usually the mother
  - b. Autonomy vs shame and guilt- children develop a growing sense of independence.
  - c. Initiative vs guilt – children become aware of their environment through the increasing use of imagination and fantasy
  - d. Industry vs inferiority – children begin to learn the values and skills of the environment (school, homework)
  - e. Identity vs role confusion – children are concerned with how they appear in the eyes of peers as well as finding out “who I am.”
  - f. Intimacy vs isolation – young adults begin to form meaningful relationships with other adults
  - g. Generativity vs stagnation – adults become active members of society and have children.
  - h. Integrity vs despair – feeling satisfaction/dissatisfaction from life.

## MATCHING

- 4. Match the following characteristics of intellectual development with the four stages listed below:**
  - (A) Sensorimotor
  - (B) Preoperational
  - (C) Concrete Operations
  - (D) Formal Operations
  1. A Things continue to exist even when they are out of sight.

2. D They can think about issues and ideas
3. D They can consider simultaneously more than one variable in the solution of a problem.
4. A During this stage, children receive information from their environment primarily through the senses.
5. D Able to form and carry out symbolic plans based on hypothetical events.
6. B At this stage, children usually see themselves as the center of their environment
7. B They learn to play cooperatively with other children
8. B Language development is very rapid
9. A Receives information through a multitude of physical motor explorations
10. C They understand that a ball of clay contains about the same amount of clay regardless if it is a circle or a rectangle.

**5. Match the following stages with the levels of intellectual disability**

- A. Sensorimotor
  - B. Preoperational
  - C. Concrete Operations
  - D. Formal Operations
1. B Individuals with moderate intellectual disability
  2. C Individuals with mild intellectual disability
  3. A Individuals with severe and profound intellectual disability.

**6. True/False**

- | True             | False         |   |
|------------------|---------------|---|
| 1. <u>  T  </u>  | <u>      </u> | Children and youth have more in common with their chronological age peers with disabilities than they have differences. |
| 2. <u>      </u> | <u>  F  </u>  | Development proceeds from the abstract and complex to the concrete and simple.  |
| 3. <u>  T  </u>  | <u>      </u> | The acquisition of language is unique to humans.  |
| 4. <u>  T  </u>  | <u>      </u> | A baby, regardless of where s/he is born, is capable of producing every sound used in all languages on the earth.       |
| 5. <u>  T  </u>  | <u>      </u> | Majority of individuals with intellectual disability are functioning at the concrete operational stage.                 |

## FEEDBACK EXERCISE II

### 1. Matching (Match the developmental stages with the patterns of behavior).

- (A) Age of Dependence - birth to 24 months
- (B) Age of Exploring - 24 to 36 months
- (C) Preschool children - ages 3 to 5
- (D) Early elementary children - ages 5 to 8
- (E) Late childhood Pre-adolescent - ages 8 to 11
- (F) Adolescence

1. U During this period, children begin to play with toys that can be manipulated (clay, blocks, etc.)
2. A This is the time for greatest growth in children.
3. B Children will spend more time in active play at the beginning of this age with more time in quiet play at the end of this age.
4. A Children at this age are not selfish, rather they can see the world from their own viewpoint.
5. C They move from parallel play to cooperative play.
6. B They are beginning to put words together for longer and more complicated sentences.
7. E Peer group approval becomes increasingly important.
8. F It is characterized by rapid growth and marked changes in body proportions.
9. C Children at this developmental stage are learning basic academic skills - reading, writing, and arithmetic.
10. E They are interested in organized games and competitive activities.
11. D They learn to skip, skate, ride a two-wheel bike, walk a balance beam, and hold a pencil.
12. F They are able to shift from concrete to abstract thinking.
13. F They become less dependent on their family and try to achieve independence and autonomy.
14. D Predominant hand is established.
15. F During this period, peer groups influence young people more than any other factor.

### Listing

#### 2. List at least three positive aspects of aging.

- (a) Decreased family responsibilities.
- (b) More free time to pursue hobbies
- (c) Freedom from jobs that may have been anxiety producing.

#### 3. List some aspects of aging that can be challenging

- (a) Loss of loved one or same-aged friends
- (b) Medical difficulties
- (c) Sensory loss

## FEEDBACK EXERCISE III

### Listing

**1. List at least three environmental factors that can cause disabilities.**

- (a) Toxins in the air
- (b) Water pollution
- (c) Lead poisoning
  - Poor nutrition

**2. Many disabilities are the result of something happening to the fetus while it is still in the mother's womb. List at least four of those causes.**

- (a) Poor nutrition
- (b) Hepatitis or measles
- (c) Use of drugs
- (d) Alcohol
  - Smoking
  - Medicine
  - Food additives

**3. Some disabilities result from conditions present at the time of birth. List at least four of those conditions.**

- (a) Prematurity
- (b) Loss of oxygen
- (c) Long labor
- (d) Excessive hemorrhaging or loss of blood from the mother
  - Early separation of the placenta
  - Direct injury to the head

**4. In some cases children acquire disabilities after birth. List at least three of these cases.**

- (a) Injury to the central nervous system
- (b) Inability to breathe
- (c) Poisoning
  - Tumors
  - Infectious diseases

**5. List the three characteristics that must be present for an intellectual disability diagnosis as defined by AAIDD.**

- (a) Significant limitations in intellectual functioning
- (b) Significant limitations in adaptive behavior, which covers many everyday social and practical skills.
- (c) The diagnosis must be made in the developmental period - birth to 18 years.

**6. Marc Gold developed a different definition from the AAMR (now AAIDD) definition. Describe Gold's definition and compare it with the AAMR (now AAIDD) definition.**

Marc Gold suggested that the level of intellectual disability is defined by the amount of power necessary for the teacher to use to teach that person.

The American Association on Intellectual and Developmental Disabilities definition simply defines the condition of intellectual disability. Marc Gold's definition recommends the use of tools, strategies, and techniques necessary to improve the condition of intellectual disability.

**7. Fill in the Blanks**

Causes of disabilities may be genetic or they may be environmental.

Causes may occur during the prenatal, natal, or postnatal periods.

**8. List 5 of the adaptive skill areas individuals with intellectual disability may be limited in:**

- (a) Communication
- (b) Self-Care
- (c) Home Living
- (d) Social Skills
- (e) Community Use
  - Self-Direction
  - Health and Safety
  - Functional academics
  - Leisure
  - Work

**9. What are five common themes in defining a learning disability?**

- (a) The cause of a learning disability is believed to be due to some form of central nervous system dysfunction.
- (b) The individuals have an uneven growth pattern; some strengths and some weaknesses.
- (c) Average or above average intelligence

- (d) Major discrepancy between potential (IQ) and achievement.
- (e) Exclusion of other factors as the primary cause of the problem.

**10. The primary difference between children with a serious emotional disturbance and their peers is:**

The primary difference between children and youth with severe emotional disturbance and their peers is in the degree to which they are able to monitor, control, or change their patterns of behavior.

**11. List at least four techniques to assist persons developing hearing skills.**

Depending on the degree and type of hearing loss, there are a variety of techniques currently available to assist people to develop skills in these sound amplification areas:

- (a) Auditory Training (listening skills)
- (b) Speech reading (lip reading)
- (c) Finger Spelling and Sign Language
- (d) Written and Visual Presentations.

Using a combination of all methods is referred to as “total communication”.

**12. True/False**

- | True         | False        |   |
|--------------|--------------|---|
| <u>  T  </u> | _____        | People with learning disabilities may have average or above average intelligence.   |
| <u>  T  </u> | _____        | Only a small percentage of people are blind.  |
| _____        | <u>  F  </u> | People with various degrees of visual disabilities are unable to take care of themselves and live and work independently. |

## Simulations

Although we can never completely duplicate what it is like to have a disability, through simulations we can provide some understanding of what it might be like. The following activities are designed to allow the trainees to experience some of the difficulties created by various disabilities and to examine their reactions and emotions as a result of participating in these activities.

### A. Learning Disabilities

Goal: To enable participants to develop an awareness of reading and visual motor disabilities.

#### Activity #1

Have the group read the following activity. When the group has completed the exercise, ask for a volunteer to read the translation.

This is a story to help you understand what it might be like to have a reading learning disability.

### The Friembly Bog

Once upon a time there was a friembly dog. His name was Jake. Jake belonged to Bavig and Bhte. Davib and Beth are his. They are nine years old.

One time Jake went down to the cellar. He was a bucket of soap. The tins were doing to wash the car. He liked some soap bubbles out of the bucket. When he looked, big bubbles came out of his mouth!

Last summer Jake found a friend. His friend was a cat named Freb. They played all day. They ran around and around the yard. Jake chased the cat but he tried. Freb climbed up easily. Jake tried to and tried but he slipped back down!

**ANSWER SHEET**  
**The Friendly Dog**

Once upon a time there was a friendly dog. His name was Jake. Jake belonged to David and Beth. David and Beth are twins. They are nine years old.

One time Jake went down to the cellar. He saw a bucket of soap. The twins were going to wash the car. He licked some soap bubbles out of the bucket. When he barked, big bubbles came out of his mouth.

Last summer Jake found a friend. His friend was a cat named Fred. They played all day. They ran around the yard. Jake chased the cat up the tree. Fred climbed up easily. Jake tried and tried but he slid back down.

## **B. Deafness and Hearing Loss**

Goal: To acquaint participants with what it is like to have a hearing loss.

Materials: Cassette recorder and ear plugs.

### **Activity #2**

Ask the participants to work in pairs and to carry on a conversation about any subject they choose.

One person should wear the ear plugs.

### **Activity #3**

Use a cassette recorder to record the following words: wish, three, pill, station, snow, watched, splinters, tick, mice, and jump. The first time you record the words: 1) speak into a can or container and muffle your voice with a cloth around the container and 2) re-record the words on a lower volume, muffled through the cloth. The third time, repeat the words with normal volume and without any distortion. Have participants number a paper to 10 in three columns to be used during each segment of the test. The test can be administered to the entire class or individuals can take the test while others are taking part in the other activities.

## **C. Blindness and Low Vision**

Goal: To enable participants to develop an awareness of what it is like to have different degrees of low vision.

Materials: Blindfolds and/or sleep masks and old glasses smeared thickly with Vaseline to simulate different vision impairments.

### **Activity #4**

1) Place several easily identifiable objects into a bag. Ask the participants to put on a blindfold and to identify them by touch; 2) have the participants try to read small print; 3) navigate through the halls with a buddy.

## **D. Physical Disabilities**

Goal: To help participants understand the difficulty of performing tasks without the use of their fingers and hands and to help them understand the impact of restricted mobility.

Materials: Adhesive tape (and other items listed in Activity 5 below), wheelchairs, and crutches.

### **Activity #5**

Have participants tape both thumbs to the palm of their hands. Give them tasks to perform such as writing their names, picking up small objects (pennies or paper clips), buttoning a shirt or blouse, using forks, spoons and knives, and drinking from a glass.

### **Activity #6**

Have the participants practice using the wheelchair and/or crutches before leaving the room.

Encourage them to move about the building, use a water fountain, a pay phone, the rest room, and if practical to go out of the building to shops.