

UNIT II: GROWTH & DEVELOPMENT

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E-Content

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UNIT II

GROWTH AND DEVELOPMENT

INSTRUCTIONAL OBJECTIVE

- To develop an understanding about different aspects of human development from infancy to adolescence.

INTRODUCTION

The human being is never static. From the moment of conception to the time of death, the person is undergoing changes. Development may be defined as a progressive series of orderly, coherent changes. The various developments that take place during the life time of an individual are physical, motor, social, emotional, intellectual, aesthetic and moral. Developmental Psychology is the branch of psychology that studies intra individual and inter individual changes.

The Developmental Process

The aim of education is to bring desirable changes in the learner. These changes are taking place due to growth and development. Therefore, to bring desirable changes in the child, knowledge of growth and development especially how the pre-natal and post-natal development takes place, how child's behaviour due to interaction with the surrounding etc is to be understood by prospective teachers.

Change is the law of nature. Animate or inanimate object are all subject to change. As far as human beings are concerned life starts with the conception in the mother's womb as a result of the process of fertilization of the ovum of the mother by the sperm cell of the father. Then mother's womb becomes the site and means for the growth and development of new life and after nine month , baby come in to the world .i.e. the process by which a germinating seed or conceived organism is turned in to mature plant or full-fledged being called 'growth and development'. Growth refers to increase in the size of body parts or of the organism as a whole. It can be measured or quantified. E.g. growth in height, weight, size etc. In other words, growth refers to cell multiplication or quantitative changes in size, weight, and number.

Development is a process by which an individual grows and changes throughout the life cycle. Or it refers to qualitative changes that begin at conception and continue through life span. e.g. ability to sit, stand, walk, learning to talk etc. In the words of Elizabeth Hurlock, ' the term development means progressive series of changes that occur in an orderly predictable pattern as a result of maturation and experience'. According to Crow & Crow, 'growth refers to structural and physiological change and development is concerned with growth as well as those changes in which result from environmental situations'. Therefore, growth is quantitative and development is qualitative.

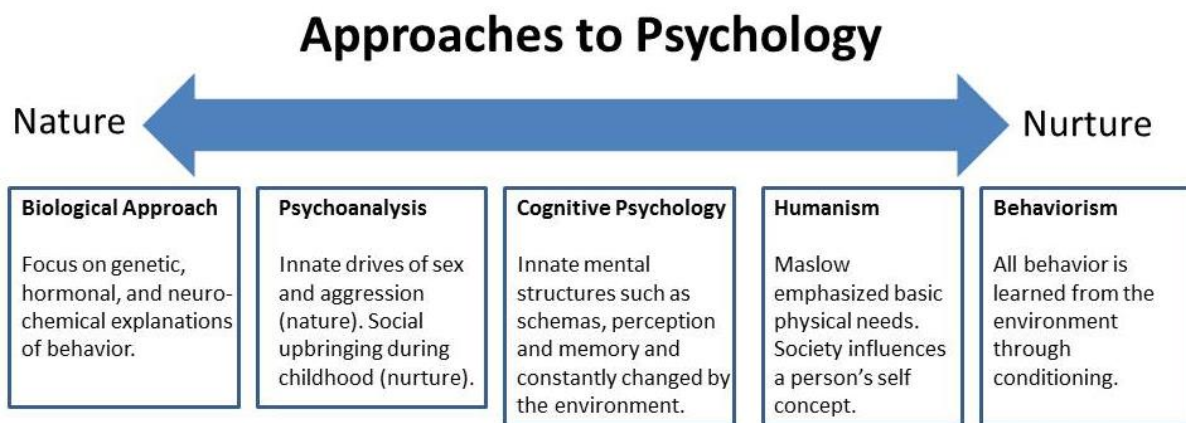
Table. 2.1: Comparisons between Development and Growth

Development	Growth
A progressive series of changes that occur as a result of maturation and learning	Structural and physiological changes
functional change	structural change
overall changes	particular
Qualitative	quantitative
direct measurement difficult	possible
progressive changes	changes both progressive and retrogressive
continuous process possible without growth E.g. Intellectual functions in abstract thinking	may or may not bring development E.g. increase in brain weight

FACTORS INFLUENCING DEVELOPMENT

This debate within psychology is concerned with the extent to which particular aspects of behaviour are a product of either inherited (i.e. genetic) or acquired (i.e. learned) characteristics. Nature is what we think of as pre-wiring and is influenced by genetic inheritance and other biological factors. Nurture is generally taken as the influence of external factors after conception e.g. the product of exposure, experience and learning on an individual. The nature-nurture debate is concerned with the relative contribution that both influences make to human behaviour.

Figure 2.1



Hereditry (Nature) and Environment (Nurture)

It has long been known that certain physical characteristics are biologically determined by genetic inheritance. Colour of eyes, straight or curly hair, pigmentation of the skin and certain diseases are all a function of the genes we inherit. Other physical characteristics, if not determined, appear to be at least strongly influenced by the genetic make-up of our biological parents.

Height, weight, hair loss (in men), life expectancy and vulnerability to specific illnesses (e.g. breast cancer in women) are positively correlated between genetically related individuals. These facts have led many to speculate as to whether psychological characteristics such as behavioural tendencies, personality attributes and mental abilities are also “wired in” before we are even born.

Those who adopt an extreme hereditary position are known as **nativists**. Their basic assumption is that the characteristics of the human species as a whole are a product of evolution and that individual differences are due to each person’s unique genetic code. In general, the earlier a particular ability appears, the more likely it is to be under the influence of genetic factors.

At the other end of the spectrum are the environmentalists – also known as empiricists (not to be confused with the other empirical / scientific approach). Their basic assumption is that at birth the human mind is a tabula rasa (a blank slate) and that this is gradually “filled” as a result of experience (e.g. behaviourism).

From this point of view psychological characteristics and behavioural differences that emerge through infancy and childhood are the result of learning. It is how you are brought up (nurture) that governs the psychologically significant aspects of child development and the concept of maturation applies only to the biological.

For example, when an infant forms an attachment it is responding to the love and attention it has received, language comes from imitating the speech of others and cognitive development depends on the degree of stimulation in the environment and, more broadly, on the civilization within which the child is reared.

In contrast Bandura's (1977) social learning theory states that aggression is a learnt from the environment through observation and imitation. This is seen in his famous *Bobo doll experiment* (Bandura, 1961). Also, Skinner (1957) believed that language is learnt from other people via behaviour shaping techniques.

This question was first framed by **Francis Galton** in the late 19th century. Galton (himself a relative of **Charles Darwin**) was convinced that intellectual ability was largely inherited and that the tendency for “genius” to run in families was the outcome of a natural superiority.

This view has cropped up time and again in the history of psychology and has stimulated much of the research into intelligence testing (particularly on separated twins and adopted children). A modern proponent is the American psychologist **Arthur Jensen**. Finding that the average I.Q. scores of black Americans were significantly lower than whites he went on to argue that genetic factors were mainly responsible – even going so far as to suggest that intelligence is 80% inherited.

The storm of controversy that developed around Jensen’s claims was not mainly due to logical and empirical weaknesses in his argument. It was more to do with the social and political implications that are often drawn from research that claims to demonstrate natural inequalities between social groups. Galton himself in 1883 suggested that human society could be improved by “better breeding”.

Now we can see why the nature-nurture debate has become such a hotly contested issue. What begins as an attempt to understand the causes of behavioural differences often develops into a politically motivated dispute about distributive justice and power in society. What’s more, this does not only apply to the debate over I.Q. It is equally relevant to the psychology of sex and gender, where the question of how much of the (alleged) differences in male and female behaviour is due to biology and how much to culture is just as controversial.

However, in recent years there has been a growing realization that the question of “how much” behaviour is due to heredity and “how much” to the environment may itself be the wrong question. Take intelligence as an example. Like almost all types of human behaviour it is a complex, many-sided phenomenon which reveals itself in a great variety of ways. The “how much” question assumes that the variables can all be expressed numerically and that the issue can be resolved in a quantitative manner. The reality is that nature and culture interact in a host of qualitatively different ways.

It is widely accepted now that heredity and the environment do not act independently. Instead of defending extreme nativist or nurturist views, most psychological researchers are now interested in investigating the ways in which nature and nurture interact. For example, in psychopathology, this means that both a genetic predisposition and an appropriate environmental trigger are required for a mental disorder to develop.

PRINCIPLES OF GROWTH AND DEVELOPMENT

Growth and Development do not take place in a haphazard manner. They tend to follow certain principles underlie certain process of development, which can be observed in all human being. Crow and Crow says; 'Growth refers to structural and physiological change, while development refers to growth as well as those changes in behaviour, which result from environmental stimulation'. Growth refers to structural and physiological changes. It generally refers to an increase in size, height and weight. While development refers to changes in the organism as a whole. Growth can be measured. Development can be observed. Growth stops at maturity. But development continuous throughout the life. Growth may or may not bring development. Development is also possible without growth. Growth is quantitative. But development is both quantitative and qualitative. Growth takes place through twin process of differentiation and integration. Whereas development is a wider process, but growth is only part of it.

- Development is continuous
- Development follows an orderly pattern
- Development proceeds from general to specific
- Development leads to integration
- Principle of cephalocaudal and proximo distal tendencies
- Development proceeds from egocentricism to allocentricism
- Development proceeds from heteronomy (dependence) to autonomy
- Development is an individualized process
- Development is predictable

- Development is the product of the interaction between maturation and learning
- Principle of interrelation
- Development is cumulative
- Development is the product of the interaction between heredity and environment
- Development is complex
- Development is spiral and not linear

EDUCATIONAL IMPLICATIONS OF GROWTH AND DEVELOPMENT

The human being is never static. From the moment of conception to the time of death, the person is undergoing changes. Development may be defined as a progressive series of orderly, coherent changes. The various developments that take place during the life time of an individual are physical, motor, social, emotional, intellectual, aesthetic and moral.

1. Development is a continuous process, so the teacher should take continuous efforts to achieve perfection in the various aspects of development of the child.
2. Development is individualized process. So, each child should be helped along the development process within the sphere of his individual ability.
3. Development follows an orderly sequence. This knowledge helps the teacher to plan learning process and arrange suitable learning experiences so as to achieve maximum gains in terms of growth and development.
4. Different aspects of development are interrelated and interdependent. The knowledge cautions the teacher not to encourage the development of a particular aspect at the cost of another.

5. The principle of interaction between heredity and environment reminds the teacher to arrange for the best environmental settings and experiences for children so that they can develop maximum within the limits of their genetic makeup.
6. The goal of developmental changes is that, to enable the people to adapt to the environment in which they live.
7. Maturation is the biological unfolding of the characteristics according to a plan contained in the genes, or the hereditary material passed from parents to child. Learning is the process through which experience brings about relatively permanent changes in thoughts, feelings or behaviour.

INFANCY (0-2 Years)

An infant (from the Latin word infants, meaning "unable to speak" or "speechless") is the very young offspring of a human or animal. When applied to humans, the term is usually considered synonymous with baby or brain (in Scottish English), but the latter is commonly applied to the young of any animal. When a human child learns to walk, the term toddler may be used instead.

The term infant is typically applied to young children between the ages of 1 month and 12 months; however, definitions may vary between birth and 1 year of age, or even between birth and 2 years of age. A newborn is an infant who is only hours, days, or up to a few weeks old. In medical contexts, newborn or neonate (from Latin, neonatus, newborn) refers to an infant in the first 28 days after birth; the term applies to premature infants, post mature infants, and full term infants. Before birth, the term foetus is used.

Characteristics of Infancy

- Very fast changing phase
- rate of growth is very fast, but not as much as in Prenatal stage

- a nutrition-dependent phase
- high velocity of growth declines after year one
- nervous system develops faster
- birth weight and length increases (usually doubles weight by 9 months)
- uncoordinated movements
- responds to human touch & voice
- poor vision (focusing range = 8 to 12 inches)
- Reflexes: sucking, grasping, stepping, rooting, startle

Physical Development during Infancy

Three month old infants can sit with their head held steady for a few seconds, if supported 6 months Infants have more strength and muscle control. They can lift their heads, sit without support, and turn their head to look around. They can pull themselves up when their hands are grasped 9 months Infants can sit unsupported for ten minutes. They are starting to move independently by rolling or squirming. They can pull themselves to stand, and can stand holding onto something for a few moments 12 months Infants can get from a lying to a sitting position without help. They crawl rapidly. They can walk by holding onto furniture and stand alone for a few moments. 15 months Infants can get on their feet alone. They can walk and crawl upstairs. 18 months Infants can run, walk upstairs and crawl downstairs . 2 years Infants can walk downstairs. 3 years Infants can climb on play equipment, ride a tricycle and throw and catch a ball.

From birth to age two, interactions and patterns of attachment between the infant and the primary caregiver are an important catalyst for cognitive, linguistic, social-emotional, and behavioural development. Noticeable developmental changes occur rapidly during the infancy period, particularly when comparing the completely dependent child at birth to a child at age two who is able to put words together, walk alone, and navigate the social environment with purpose. For this reason, milestones within each domain are organized according to the period of birth to six months,

seven months to 1 year, 13 months to 18 months, and 19 months to two years, to better reflect the sequencing of change during the infancy and early toddlerhood periods.

Cognitive and linguistic milestones from birth to six months

During this period, the infant's use of sight, sound, taste, touch, and smell facilitates cognitive and linguistic growth as well as social interaction with primary caregivers. From birth to six months, infants' perceptual acuity begins to improve, leading to the increased differentiation of external stimuli, such as patterns, colours or sounds, as well as the recognition of facial expressions. As they navigate their new world, babies are attracted to stimuli that help them in this quest—brightly coloured mobiles, clear sounds like bells and whistles and easy to distinguish shapes and patterns. These perceptual changes coincide with the infant's growing preference for familiar people and stimuli. At birth, most babies tolerate being held by a number of different adults without showing too much distress. However, closer to age six months, babies may cry or whimper more often when held by unfamiliar adults or family members, developing a particular preference for the face, vocal sounds and smell of the primary caregiver, typically the mother in most cultures. In some sense, normal developmental processes during infancy suggest it might be easier for a child to start communal care arrangements like day care at a relatively younger age (earlier than six months) before developing clear preferences for caregivers or settings.

Cognitive and linguistic milestones during seven months to one year

Infants continue to use their growing perceptual and sensory capabilities to inform cognitive and linguistic development during this period as they approach one year of age. At this time, infants' memory and attention skills continue to improve, although

memory in these early stages is contingent upon the familiarity of the situation or person or the infant's motivation, for example, to interact with others or use a toy. A milestone of this developmental period is **object permanence**, an understanding that objects or people still exist when these items are not readily seen or heard, that emerges around eight months (Piaget, 1954).

Cognitive and linguistic milestones from 13 months to 18 months

During this time period infants expand their repertoire of earlier cognitive skills. Most babies not only search for objects hidden from sight - characteristic of object permanence - but look for these items in more than one location, such as under the couch and in other rooms, making organized games like hide-and-seek possible. Memory storage and retrieval continues to advance - babies at this age can imitate others with increasing delays between the time of the observed behaviour and the imitation of this behaviour in other contexts. Infants at this age also begin to store prior experiences in memory and are aware of times when present situations are not in accordance with prior events or their pre-existing expectations.

Cognitive and linguistic milestones from age 19 months to two years

As the infant approaches toddlerhood, cognitive advances continue in the areas of memory, problem solving and attention (executive functioning). Beginning at this stage, infants can develop and carry out action plans, such as building a specific type of structure with blocks. Whereas 10-month-old children cannot typically sustain play together - typically sit side by side in a playroom (called parallel play) - the play of infants at this stage becomes more interactive. When a pair of 20-month-old infants plays together, they might engage in pretend or make-believe play. A common theme for make-believe play is engaging in everyday tasks that the infants have observed others perform, such as eating, cooking, sleeping, or feeding household pets.

Table 2.2. Summary of developmental milestones from zero to two years

	<i>Cognitive and linguistic milestones: Social stimulation and interaction</i>	<i>Social-emotional and behavioural milestones: Attachment relationship</i>
Birth to six months	<ul style="list-style-type: none"> • Better differentiation of external stimuli (sounds, colours, etc.) • Recognition of facial expression • Preference for familiar people, stimuli and face-to-face interactions. • Improvement of memory and attention skills (infants can remember and attend to certain people, physical locations or objects) • Use of crying to express basic needs (hunger, thirst, comfort, etc.) • Emergence of language precursors: Cooing (2 months) and babbling (4 months) • Joint attention: Caregiver and baby take turns exchanging facial expressions and noises. 	<ul style="list-style-type: none"> • Early behavioural and emotional self-regulation based on establishment of regular activities and routines (e.g., eating, sleeping, etc.) • Sleep cycles become more predictable by the age of eight weeks • Gaze aversion: Normal reaction to overstimulation and arousal • Social smile: As a response to familiar human faces (6 weeks) and as initiated by the baby (3 or 4 months). • Multiple displays of emotions by age six months (e.g., frustration, anger, sadness, etc.) • Individual and contextual differences in temperament
Seven months to one year	<ul style="list-style-type: none"> • Growing perceptual and sensory capabilities. • Improvement of memory and attention skills: Dependent on the familiarity of the situation, person, or infant's motivation • Object permanence (eight months): Objects and people still exist although not seen or heard • Emergent language skills: Babbling when interacting with the caregiver, some will speak their first word at 	<ul style="list-style-type: none"> • Development of attachment relationships: Infant's bond with the primary caregiver • Separation anxiety: Displays anxiety when the caregiver leaves • Social referencing: – How to react to ambiguous or novel situations – Facilitates acquisition of culture-bound social nuances – Differentiation between self and others.

	<p>12 months or in the next stage</p> <ul style="list-style-type: none"> • Can point to an object (e.g., a toy) around one year • Will learn and respond to own name 	
13 months to 18 months	<ul style="list-style-type: none"> • Expansion of their repertoire of earlier cognitive skills: <ul style="list-style-type: none"> - Object permanence: Will look for the hidden item in more than one location - Memory and retrieval: Increasing delays between the observed behaviour and its imitation in other contexts - After the first word (eight-18 months): Vocabulary grows to about 200 words 	<ul style="list-style-type: none"> • Self-awareness: Recognition of oneself • First demonstrations of empathy: Capacity to reflect and feel the emotions demonstrated by another person (e.g., when infants see displays of negative emotionality in their caregiver, they may show their own personal distress or attempt to comfort the caregiver).
19 months to two years	<ul style="list-style-type: none"> • Cognitive advances in memory, problem solving, and attention: <ul style="list-style-type: none"> - Development and execution of action plans (e.g., building a structure) - Pretend or make-believe play (20 months) and daily life play themes • Advanced linguistic skills: <ul style="list-style-type: none"> - Combining two or more words - Replacement of parts of a word with vowels or consonants that are easier to say - Vocabulary growth. 	<ul style="list-style-type: none"> • Use of language and other behaviours to regulate emotional experience • Growing awareness of others Emergence of more complex emotions (e.g., embarrassment, guilt, shame, etc.) • Lower intensity of separation anxiety • First signs of self-control: Able to delay engagement in an enjoyable task • Play: Imitation of others, use of language and play choices based on gender stereotypes.

How does a child grow and develop between the ages of 2 and 5?

The ages between 2 and 5 are often called the preschool years. During these years, children change from clumsy toddlers into lively explorers of their world. A child develops in these main areas:

- *Physical development.* In these years, a child becomes stronger and starts to look longer and leaner.
- *Cognitive development.* A child this age makes great strides in being able to think and reason. In these years, children learn their letters, counting, and colors.
- *Emotional and social development.* Between the ages of 2 and 5, children gradually learn how to manage their feelings. By age 5, friends become important.
- *Language.* By age 2, most children can say at least 50 words. By age 5, a child may know thousands of words and be able to carry on conversations and tell stories.
- *Sensory and motor development.* By age 2, most children can walk up stairs one at a time, kick a ball, and draw simple strokes with a pencil. By age 5, most can dress and undress themselves and write some lowercase and capital letters.

CHILDHOOD (3-12 Years)

Definitions of stages of growth in childhood come from many sources. Theorists such as Jean Piaget, Lev Vygotsky, Lawrence Kohlberg, and Erik Erikson have provided ways to understand development, and recent research has provided important information regarding the nature of development. In addition, stages of childhood are defined culturally by the social institutions, customs, and laws that make up a society. For example, while researchers and professionals usually define

the period of early childhood as birth to eight years of age, some others might consider age five a better end point because it coincides with entry into the cultural practice of formal schooling.

There are three broad stages of development: early childhood, later childhood, and adolescence. The definitions of these stages are organized around the primary tasks of development in each stage, though the boundaries of these stages are malleable. Society's ideas about childhood shift over time, and research has led to new understandings of the development that takes place in each stage.

Early Childhood (2 to 7 Years)

Early childhood is a time of tremendous growth across all areas of development. The dependent newborn grows into a young person who can take care of his or her own body and interact effectively with others. For these reasons, the primary developmental task of this stage is skill development.

Physically, between birth and age three a child typically doubles in height and quadruples in weight. Bodily proportions also shift, so that the infant, whose head accounts for almost one-fourth of total body length, becomes a toddler with a more balanced, adult-like appearance. Despite these rapid physical changes, the typical three-year-old has mastered many skills, including sitting, walking, toilet training, using a spoon, scribbling, and sufficient hand-eye coordination to catch and throw a ball.

Between three and five years of age, children continue to grow rapidly and begin to develop fine-motor skills. By age five most children demonstrate fairly good control of pencils, crayons, and scissors. Gross motor accomplishments may include the ability to skip and balance on one foot. Physical growth slows down between five and eight years of age, while body proportions and motor skills become more refined.

Physical changes in early childhood are accompanied by rapid changes in the child's cognitive and language development. From the moment they are born, children use all their senses to attend to their environment, and they begin to develop a sense of cause and effect from their actions and the responses of caregivers.

Over the first three years of life, children develop a spoken vocabulary of between 300 and 1,000 words, and they are able to use language to learn about and describe the world around them. By age five, a child's vocabulary will grow to approximately 1,500 words. Five-year-olds are also able to produce five-to seven-word sentences, learn to use the past tense, and tell familiar stories using pictures as cues.

Language is a powerful tool to enhance cognitive development. Using language allows the child to communicate with others and solve problems. By age eight, children are able to demonstrate some basic understanding of less concrete concepts, including time and money. However, the eight-year old still reasons in concrete ways and has difficulty understanding abstract ideas.

A key moment in early childhood socio emotional development occurs around one year of age. This is the time when attachment formation becomes critical. Attachment theory suggests that individual differences in later life functioning and personality are shaped by a child's early experiences with their caregivers. The quality of emotional attachment, or lack of attachment, formed early in life may serve as a model for later relationships.

From ages three to five, growth in socio-emotional skills includes the formation of peer relationships, gender identification, and the development of a sense of right and wrong. Taking the perspective of another individual is difficult for young children, and events are often interpreted in all-or-nothing terms, with the impact on the child being the fore-most concern. For example, at age five a child may expect others to share their possessions freely but still be extremely possessive of a favourite toy. This creates no conflict of conscience, because fairness is determined relative to the child's own interests. Between ages five and eight, children enter into a broader peer context and develop enduring friendships. Social comparison is

heightened at this time, and taking other people's perspective begins to play a role in how children relate to people, including peers.

Early Childhood: Implications for in-school learning

The time from birth to eight years is a critical period in the development of many foundational skills in all areas of development. Increased awareness of, and ability to detect, developmental delays in very young children has led to the creation of early intervention services that can reduce the need for special education placements when children reach school age. For example, earlier detection of hearing deficits sometimes leads to correction of problems before serious language impairments occur. Also, developmental delays caused by premature birth can be addressed through appropriate therapies to help children function at the level of their typically developing peers before they begin school.

Characteristics of Early Childhood

- rate of growth decreases or slows down; growth is slowest by the 3rd year, but stable and consistently increasing
- learning ability which was launched in the 1st year becomes faster as the child is exposed to new environment
- all the psychomotor skills are enhancing; muscle coordination allows the child to run, climb, move freely
- speech is learned; child recognizes letters and some words
- teeth erupt
- short attention span

Later Childhood (Eight to Twelve Years)

Historically, Later childhood has not been considered an important stage in human development. Sigmund Freud's psychoanalytic theory labelled this period of life the latency stage, a time when sexual and aggressive urges are repressed. Freud

suggested that no significant contributions to personality development were made during this period. However, more recent theorists have recognized the importance of middle childhood for the development of cognitive skills, personality, motivation, and inter-personal relationships. During middle childhood children learn the values of their societies. Thus, the primary developmental task of middle childhood could be called integration, both in terms of development within the individual and of the individual within the social context.

As with physical development, the cognitive development of middle childhood is slow and steady. Children in this stage are building upon skills gained in early childhood and preparing for the next phase of their cognitive development. Children's reasoning is very rule based. Children are learning skills such as classification and forming hypotheses. While they are cognitively more mature now than a few years ago, children in this stage still require concrete, hands-on learning activities. Middle childhood is a time when children can gain enthusiasm for learning and work, for achievement can become a motivating factor as children work toward building competence and self-esteem.

Later Childhood: Implications for in-school learning

For many children, middle childhood is a joyful time of increased independence, broader friendships, and developing interests, such as sports, art, or music. However, a widely recognized shift in school performance begins for many children in third or fourth grade (age eight or nine). The skills required for academic success become more complex. Those students who successfully meet the academic challenges during this period go on to do well, while those who fail to build the necessary skills may fall further behind in later grades.

Recent social trends, including the increased prevalence of school violence, eating disorders, drug use, and depression, affect many upper elementary school students. Thus, there is more pressure on schools to recognize problems in eight-to eleven-year-olds, and to teach children the social and life skills that will help them continue

to develop into healthy adolescents. Late Childhood phase influenced by growth of sex hormones.

Educational implications of development at Childhood

- Parents should take care of the education of the child. They should lay foundations for all improvement in different dimension of developments.
- A sound mind has to built in this early stages. Physical activities should be an integral part of education. Proper nourishing food should be given. Protection from epidemic diseases must be carefully attended.
- Mother-tongue should be taken as the medium of instruction since mother-tongue has an emotional attachment by being early understood.
- There should be associated with good environments that may keep themselves away from various deeds.
- The instincts of curiosity should be developed. Their questions must be properly answered. They should broaden the mental horizon of the child.
- Group playing, peer group relations should be encouraged. Education should find provision for such developments of social qualities.
- Some interesting and entertaining activities such as music, fine arts etc should be the essential part of education at this stage.
- Play way method in education is the essential psychological approach at this stage of education. Scientific and attractive toys, models etc should be freely displayed to their access for releasing then innate and dormant qualities.

Social Development During Early Childhood (3-7 years)

During early childhood, the social behaviour of the child exhibits a progressive change from individualization towards socialization. During three and four years child is completely ego-centric. That is in this period he is unable to identify his self with others. He has no social insight. He is unable to accept the point of view of others. He thinks all is based on himself. As the child approaches his fourth year, he comes to realize that 'what is mine is yours' also and likes to share or exchange toys with his play mates.

Factors Affecting Social Development

- Home
- Parental attitude and social development
- Child rearing practices
- Relation with siblings
- Socio Economic Status (SES)
- Influence of Peer Group
- School

ADOLESCENCE

It is aptly said that a child during baby learn to adjust himself and also discourages his own personality. In the pre-school period the child simply learns to adjust to his family. When he reaches middle childhood he leans to adjust to the society. This adjustment is considered to be most difficult and is usually dependent on the earlier adjustment to self, family and school. From the theoretical standpoint adolescence is best regarded as the recapitulation of the first period of life. The word adolescence comes from a Latin word which means 'to grow in to maturity'. It is a bio-social transition between childhood and adulthood. So adolescence represent a period of intensive growth and change in nearly all aspects of child's physical mental social and emotional life. Period of adolescence is most crucial in the life of human being. The growth achieved, the experience gained responsibilities felt and relationship developed at this stage frame the complete future of an individual. Thus Adolescence refers to the behavioural characteristics of this period that are influenced by culture and physical changes.

The child is described to be an adolescent, when he has become sexually mature, i.e., he is able to produce of his own kind. It is very difficult to point out the exact range of adolescence period in terms of chronological years. Therefore the range of adolescence not only differs from country to country but also varies from community to community.

In our country in comparison to western countries, the period of adolescence starts early as Indian children achieve puberty earlier because of favourable climatic and cultural factors. Also it ends earlier due to the early attainment of maturity. Thus the range of period of adolescence is not rigid.

The observation of Ross reflects the above idea. "Adolescence is best regarded as the recapitulation of the first period of life. Like infancy the adolescence is the period of too much restlessness and disturbance. Stanley Hall regards it as "it is a period of stress and strain, storm and strife." Rabindra Nath Tagore, first Nobel prize winner, say about adolescence as "In this world of human affairs there is no worse nuisance than a boy at the age of fourteen. If he talks with a childish lisp, he is called a baby; and if he answers in a grown up way, he is called an impertinent".

Physical development during adolescence

During adolescence the physical growth and development reaches its peak and human body find its final stage. The maximum limit with regard to increase in size, height and weight, is achieved at this time. Bones and muscles increase to the greatest possible extent leading to a great increase in motor activity. The growth and function of all other outer and inner organ also reaches to its maximum and almost all the glands become extremely active at this stage.

Girls and boys develop the characteristic feature of their respective sexes. There is distinct change in voices between the two sexes, while the girls voices acquires shrillness and becomes sweet, while the boy's voice deepens and becomes harsher. Thus physiologically the boys and girls attain all the male and female characteristics respectively and prepare themselves for being called men and women or gentlemen or ladies. Secondary sexual characteristics also developed at this stage.

The adolescent become interested in his muscle development. He begins to participate in hard exercised like swimming, playing football and become interested in gymnastic and rustling. The value of this sort of interest of an adolescent in such exercises and

games should be closely realize by the parents and teachers who should provide full opportunity to develop his physique in the best possible manner.

During adolescence the brain also matures. This makes it possible to teach the individual the behaviour with be desire. There are individual differences in physical development. Some are small and short. While others are full and strong. The teacher should encourage such physical activities, which give each pupil a chance to succeed. The teacher can select extracurricular activities in such a way that the pupil according to their physical development can adopt them.

Emotional development during adolescence

Emotional development reaches it s maximum during adolescence. During adolescence all emotions like anxiety, fear, love, anger etc are maximum. Once again like an infant an individual experiences emotional imbalances during adolescence. The physical growth and development being maximum the strength of it gives opportunities for maximum motor activity. Therefore in matter of emotional expression and experience the adolescence provides the highest peak. At no other stage the child is so restless and emotionally disturb as in adolescence. He is too sensitive and moody and inflammable. In the words of James Ross “the adolescent leads an intensely emotional life in which we can see once more the rhythm of positive and negative phases of behaviour, in his constant alternation between intense excitement and deep expression.” That is why this period is often designated as the period of stress and strain.

Social Development

Social development implies the development of an individual in such a way as he becomes a useful member of society or the group to which he belongs. Social development begins with the infant’s first contact with other people and continues throughout life. It is the net result of the child’s constant interactions with his social environment. Social development helps in learning and acquiring social qualities of

character. Social development enables the child to adjust himself to his social environment and to maintain social relationships.

Self Concept and Social Development

When a child recognizes and identifies with his ways of growing, behaving and thinking he is strengthening his awareness of himself. This awareness of self attributes as he sees and believes them be, constitutes his self concept. The self-concept is developed from comments made by others and from inferences from experiences the child has had in his life. The child reaches middle childhood with a self concept derived through his parents immediate family and a limited number of peers. His life concept is likely to be distorted or incomplete.

Adolescence is the period of increased social relationship and contact, where as the child cares very little for the society an adolescent develops a good amount of social sense. He ceases to be egocentric, selfish and unsocial. Now he wants to mould his behaviour according to the norms of society. The social circle of an adolescent is very wide. Contrary to childhood he becomes interested in opposite sex. The friendships are more intent in making intimate friendship and attach him closely to a group. Peer group relationships control the social behaviour at this age. The child develops a strong sense of loyalty towards groups. He wants to be accepted by the group. The rejection is costly as it creates so many adjustment problems.

Another significant change in the social aspect of the child during adolescent is in his relationship with his parents and family. Now there is a desire for independency. He wants that the parents and elder members of the family should recognize his personality. He must not be treated as a child. He gives more important to the value and maintained by his peer groups than the advice of his parents. If the parents tried to impose their opinion and values in the adolescence children they may become hidden or open rebellion.

Intellectual Development and Adolescence

Adolescence is the period of maximum growth and development with regard to mental functioning. Intelligence reaches its climax during these period. Intellectual powers like logical thinking abstract reasoning and concentration are almost developed to the end of this period. An adolescent learns to reason and seeks answers to how and why of critical thinking scientifically. His power of critical thinking and observation is much developed. He develops a fine imagination, improper channelization of imagination and dissatisfied need may turn an adolescents into day dreaming. Therefore great care is to be given for proper cultivation of their power of imagination. **Hero worship** is most prominent at this period. Adolescent generally love adventures activities and develop interest in reading books.

Moral and Religious Development

With the development of social sense the children during this period learn to behave according to the norms of the society and culture. Also the group sense make then follow some moral or ethical code. It prepares a stage of proper moral development. The formation of strong sentiments during this period intensifies the process of moral development. The impact of religion and religious practice is also felt for the first time at this age. For example; an adolescent tries to talk about *God* and *Religion*.

Table 2.3: Human Development: From Infancy to Adolescence an Overview

INFANCY	<ul style="list-style-type: none">• Rapid growth. From reflex movement to movement with purpose.• From rolling over to sitting to crawling to first steps.• From using senses for learning to participating in rolling/throwing a ball.• From coos and babbles to understanding very simple commands.• From indiscriminate smiling to drawing away from strangers.• Attachment bond with caretaker is developed.
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TODDLER:	<ul style="list-style-type: none"> • From first steps to running, jumping and kicking. Bladder control achieved. • From imitating the stacking of cubes to recognizing colours. • Begins to feed self with spoon. • From using two- or four-word sentences to enjoying simple songs. • From imitation of adult behaviour to playing alone (fantasy play). • From almost total dependence to increasingly greater independence. Has temper tantrums.
EARLY CHILDHOOD:	<ul style="list-style-type: none"> • From basic toilet training to increased body awareness and exploration. More awareness of sexual differences. • From knowing colours to identifying pennies, nickels and dimes. Begins to read and write. • From four-word sentences to use of full sentences. Mastery over use of past tense words is achieved. • Begins to model and identify with adults of the same sex. • From very bossy and belligerent to wanting to please adults.
LATENCY:	<ul style="list-style-type: none"> • From putting together simple puzzles to good body control. Girls begin to develop breasts and pubic hair. • From taking care of personal needs to increasing responsibility at home and in school. Increased ability to use logic. • From first use of full sentences to well-developed language and communication skills. • From self-centred behaviour and unstable relationships to highly selective (best friend) relationships. Engaging in and enjoying competitive games. • From being sensitive to feelings of others toward self, to becoming more independent dependable and trustworthy. Likes privacy.
ADOLESCENCE:	<ul style="list-style-type: none"> • Sudden and rapid physical and sexual development. • Abstract thinking appears. May start planning for the future. • Needs less family companionship and interaction. • Usually has a gang of friends with less intense relationships. • Conflicting feelings about dependence/independence. • Worried about grades, appearance and popularity. • May appear moody, angry, lonely, impulsive, self-centred, confused and stubborn. • May develop strong interest in single, romantic relationships.

INTELLECTUAL (MENTAL) DEVELOPMENT

The mental development include the development of intellectual and mental capabilities like sensation, perception, concept formation, attention and interest, development of imagination, memory and problem solving ability and other mental abilities. The teacher's duty is to assist the child in the development of his abilities. Development of these abilities is the aim of our education. Therefore, mental development means development of mental and intellectual capabilities, which help an individual to adjust his behaviour to the ever-changing environmental conditions or to complete a task that needs complex cognitive capabilities. Intellectual abilities are interrelated, so, the overall development of this abilities can only lead to the development of an individual.

Factors affecting mental development

- Hereditary or natural factors
- Environmental or nurtural factors
- Influence of family
- Neighbourhood influence
- Influence of school
 - Teacher's behaviour
 - Method of teaching
 - Curriculum:
 - Extra-curricular activities

Areas of Mental Development

- **Sensation:** Sensation is the elementary impression gathered through sense organ. The child's response to a stimulus is influenced not only by the sensory

stimulus but also by the effect of past experience. The sensory stimulus separated from the effect of past experience is called sensation.

- **Perception:** If the sensory stimuli processed and interpreted by the brain such process is called perception. Perception can never take place in the absence of basic sensation. The sequence of events leading to perception. i.e., Sensation + Meaning = Perception.

PHYSICAL DEVELOPMENT

Physical development refers to the physical changes in the size, structure and proportion of the parts of the body that take place at the moment of conception. Directly physical development determines what children can do at a particular age. Indirectly, it influences their attitude toward self and others. As the child grows physically, the range of his experiences increases. The increase in his experience contributes to the developments in cognitive, emotional, social and moral areas. Studies show that growth comes in cycles. The term 'cycles' means that physical growth does not occur at regular rate rather in periods or phases, sometimes rapidly and sometimes slowly. During the early childhood years, the growth is slow. Height and weight increase at the lower rate during this period. During early childhood all the parts of the child's body grow, but at different rates. During early childhood, the forehead area develops faster than the lower part of the face. This is due to rapid growth of the brain. The trunk grows longer and broader in the early years of childhood.

- *Arms* - grow much longer between babyhood and age 6. Arms are thin and straight because the muscles grow at a very slow rate. Legs grow at a slower rate than the arms.
- *Teeth* - most of the baby teeth have cut through the gums shortly after babyhood ends. The baby teeth will be lost between 5 and 7. The process of losing baby teeth and replacing them with permanent teeth goes on until the child is 12 or 13 years.

- *Bones* - bone development consists of growth in bone size, change in the number of bones, and change in their composition. Bone development is most rapid during the first years of life, then relatively slow up to the time of puberty and one again more rapid.
- *Muscles and Fat* - Fatty tissues develop faster than muscle tissue during early childhood. Children who eat too much carbohydrates and too little protein will develop too many fat cells.
- *Nervous System* - At birth brain weight is one-eighth of total weight, at 10 years, one-eighteenth, at 15 years, one-thirtieth, and at maturity one fortieth.

Sex Differences

- At birth girls tend to be shorter than boys.
- Boys are generally taller than girls at all ages except 10, 11 and 12 years as girls tend to reach puberty earlier.
- Boys tend to be heavier than girls right through the first nine years. Between ten to fourteen years the girls have a tendency to shoot ahead.

Factors Affecting Physical Development : Heredity and environment are the two main factors that affect physical development. The environment factors include pre-natal and birth conditions, socio-economic status, nutrition, physical exercises etc.

MOTOR DEVELOPMENT

Motor development means the development of control over bodily movements through the co-ordinated activity of the nerve centres, the nerves and the muscles. Motor development is of greater significance for the total development of the child.

- *Good Health* which is vital to the child's development and happiness is partly dependent on exercise.

- *Emotional maturity*: Once the child develops his motor skills adequately he starts participating in team games and sports and learn to control his emotions, show sportsmanship etc.
- *Independence*: Motor development gives the child a sense of independence and with it a feeling of security since he can learn to tackle things on his own.
- *Self-Entertainment*: Motor control enables children to engage in activities which give them enjoyment even in the absence of playmates.
- *Socialization*: Good motor development contributes to the child's acceptance and provides opportunities to learn social skills.
- *Self-Concept*: Motor control leads to feelings of physical security, which are soon translated in to psychological security.

Gross and Finer Motor Skills: Motor skills can be roughly divided into two main types.

- The gross muscular skills like jumping, hopping, running, lifting and climbing.
- The finer muscular skills like drawing, painting and writing.

EMOTIONAL DEVELOPMENT

'Emotional development' refers to the emergence of emotions like anger, joy, delight, happiness, fear, anxiety and sorrow and the socially acceptable ways of expressing them. As the child grows up and becomes aware of acceptable ways of behaviour, a variety of emotions also emerge. As an infant he expresses only discomfort and delight. As he grows older expressions of joy, happiness, fear, anger and disappointment appear. He learns to express these emotions in a healthy manner. From the simple emotional states present at birth, new and more complex emotions develop. This development comes partly from maturing but mostly through learning. By the end of the first year, the baby feels fear, anger, jealousy, envy, curiosity, joy and affection.

Common Emotions

- **Affection:** Anything that gives the young child pleasure a person, a pet or a toy-becomes the object of the child's affection.
- **Anger:** Anger has a very bad influence on the personality of the individual and hence is called a negative emotion.
- **Curiosity:** Things that are new and different may make children want to explore them. later, when children can ask questions, they add facts given the answers to what they learned from exploring.
- **Envy:** The usual causes of envy in young children are the things other children own or can do.
- **Fear:** Is a form of self protecting flight from any dangerous situations. The child is frightened by loud noises, animals, strange persons, high places, darkness, loneliness, pain and falling down.
- **Grief:** The loss of anything important to children a family member, a pet or a loved toy-makes them cry and they refuse to do what they usually do.
- **Jealousy:** Jealousy is an attitude of resentment directed towards people. Whenever a parent or other adult shows more interest in, and gives more time and attention to another child, young children may resent it.
- **Joy:** Anything that makes a young child feel satisfied and important, such as doing something well and winning praise for it, gives rise to an overall feeling of happiness known as joy.

SOCIAL AND MORAL DEVELOPMENT

Social development is the ability to adjust the individual to his present social circumstances and to behave in accordance with the wishes and desires of other people i.e., Social development is a process of development by which a child acquires the necessary attitudes, values and skills that makes him an acceptable member of the group, which he belongs. According to Crow and Crow social development as the acquisition of the ability to conform to group standard. In the words of Elizabeth

Hurlock, Social development means the attaining of maturity in social setting. In defining social development, Sorenson has written, by social growth and development we mean the increasing ability to get along well with one and others. In short socialization is the process of the development of such qualities, which bring desirable changes in social behaviour of the child. It is the process whereby the biological individual is converted into a human person. An individual, mature from the social stand point, is one who co-operate with all those with whom he come into contact, and contradict them only when such a course of action becomes inevitable.

Factors influencing Social Development

Personal factors

- *Physical factor:* Healthy child have the strength to make him adjusted in the challenging social situations. He is able to mingle with people and maintain proper relationship.
- *Mental factor:* Mental factor or intelligence is very essential for adjustment and sociability to the individual
- *Emotional factor:* Those person express his emotion in a proper way at a proper time, he have posses the health social personality.

Environmental factors

- Family
- School
- Peer group

MORAL DEVELOPMENT

The term moral is derived from the Latin word Mores which means *manners*, custom or folkways. Thus an individual's moral notions and concept are determined by laws, traditions, religious ideals, custom etc. Hence moral development considered as a part of social development as well as emotional development. Moral development refers to the development of moral concept and moral behaviour. Moral concepts starts developing when the child learns what is good and what is bad, what are right and what

is wrong. The child categorizes any action that needs with his parent's disapproval and invites their criticism as bad or wrong and all actions sanctioned and welcomed by the parents are accepted as good and correct. That is, punishment and the reward control the children's right and wrong action. Moreover the child's moral development is dependent upon his emotional development. Hence moral development is a complex process in which the action and interaction of an individual and other people surrounding him is of great importance.

CONCLUSION

Development in each area affects development in other. Development of physical skills makes the infant mobile, increases, his range of activity and helps him to explore his surroundings. This also helps in cognitive development. Language development helps the child to communicate better. It also allows him to interact with more people. This interaction has a significant influence on this social development. The child is a complete person with the experiences and skills in one area influencing the development in others. The effect of each area of development cannot be separated out easily. Thus development is a holistic process.

MODEL QUESTIONS

1. "Cognitive development of an individual is the result of his successful attempt for equilibration". Explain the statement in terms of the key concept formulated by Piaget.
2. "Language is a complex system and unique to Human Beings". Substantiate.
3. Discuss briefly the relative role of nature and nurture in growth and development.

4. Discuss the Emotional characteristics of different stages of development of an individual with special emphasis on secondary school stage.
5. Sketch the social development of a child from birth to age two.
6. Suggest one curricular and one co-curricular activity that could help adolescents society specific development needs. Give reasons why you think, they would be helpful for the purpose.
7. What are the developmental tasks of Indian adolescents? How can a teacher help the adolescents to overcome the difficulties of this stage.
8. What is the importance of *Gang life* in the social development of children?

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