

# **Growth & Development**

**Course: B.Ed.**

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**Paper Title: Childhood & Growing Up**

# Introduction

- Change is the law of nature.
- Animate or inanimate objects are all subject to change. Animate objects are distinguished from inanimate objects chiefly by their potentiality to maintain the flow and cycle of life.
- Seeds, after germinating in the soil grow as saplings and then as specific plants or trees which in turn flower and produce seeds or fruits for further germination.
- Similar is the case with birds, animals and human beings who can reproduce their own kind by the transmission of specific characteristics of the species through sexual union between the male and the female.

# Meaning of Growth

- The term growth denotes a net increase in the size, or mass of the tissue.
- It is largely attributed to the multiplication of cells and increase in the intracellular substance.
- The term growth implies an increase in size. When a body or any of its parts is described as having grown, it usually means that it has become large and heavy. It is thus that we speak of the growth of arms, brain, muscles or the body in general.
- Growth means an increase or addition in size, height, length or weight and can be measured.

# Definitions of Growth

- The *Encyclopedia Britannica* defines “growth” as an increase in the size or the amount of an entity. The word growth is used for all those structural and physiological changes that take place within individuals during the process of maturation.
- According to *Hurlock* (1959): “Growth is change in size, in proportion, the disappearance of the old features and acquisition of new ones”. i.e. growth in height, falling of milk teeth and acquisition of permanent teeth.

# Definitions of Growth

- According to ***Crow and Crow*** (1962): “Growth refers to structural and physiological changes.” It means any change in size and proportion of limbs indicates structural change, whereas, an increase in the internal organs are physiological changes.

# Characteristics of Growth

- Changes in the quantitative aspects come into the domain of growth.
- Growth is used in purely physical terms; it generally refers to change in size, length, height, weight and shape of body organs like the brain etc. of an individual.
- Growth is one of the aspects of the developmental processes.
- Growth describes the changes which take place in a particular aspect of the body and behavior of an organism.
- Growth does not continue throughout life, it stops when maturity has been attained. The changes produced by growth may be quantified.
- Growth may or may not bring development. A child may grow (in terms of weight) by becoming fat, but his growth may not bring any functional improvement (qualitative change) or development.

# Meaning of Development

- Development means a change in shape, form or structure so as to improve its working or functioning.
- Human development is the progression and regression that occur within human beings over the life span.
- Development implies certain qualitative changes or changes in character leading to maturity of improvement in functioning. For example, when the muscles of the legs become strong, a child begins to crawl, then stand, and then starts walking. So, this crawling, standing and walking is called development.

# Meaning of Development

- Children grow, but they also develop by undergoing certain changes, which equip them for better work.
- Development is a progressive change the child undergoes, which increases the physical, social, mental and emotional capacities of the child.
- In the early stages of life these changes are constructive. After middle age, there are destructive changes in the body, which lead to old age

# Definitions of Development

- The **Encyclopedia Britannica** defined the word 'development' as the progressive change in size, shape, and function during the life of an organism by which its genetic potential (genotype) is translated into functioning adult systems (phenotype). This means that development includes the increase not only in the size, but also in the function of an organ.
- According to **J.E. Anderson** (1950): "Development is concerned with growth as well as those changes in behavior which results from environmental situations".
- According to **Hurlock** (1959): "Development means a progressive series of changes that occur in an orderly, predictable pattern as a result of maturation and experience."

# Definitions of Development

- According to **Crow and Crow** (1962):  
“Development is concerned with growth as well as those changes in behavior which results from environmental situations”.
- According to **Liebert, Poulos and Marmor** (1979):  
“Development refers to a process of change in growth and capability over time, as a function of both mature and interaction with the environment. Thus, the development includes Growth Capability Maturation Interaction with the environment”.

# Characteristics of Development

- Changes in the child that occur over time.
- The changes follow an orderly pattern that moves toward greater complexity and enhances survival.
- Development implies overall changes in shape, form or structure, resulting in improved working or functioning.
- It indicates the changes in the quality or character rather than in quantitative aspects.
- Development is a wide and comprehensive term; it refers to overall changes in the individual. Growth is one of its aspects. It can be observed by maturing behavior.
- Development describes the changes in the organism as a whole and does not list changes in parts.
- Development is a continuous and lifelong process.
- Development implies improvement in functioning and behavior and hence brings qualitative changes

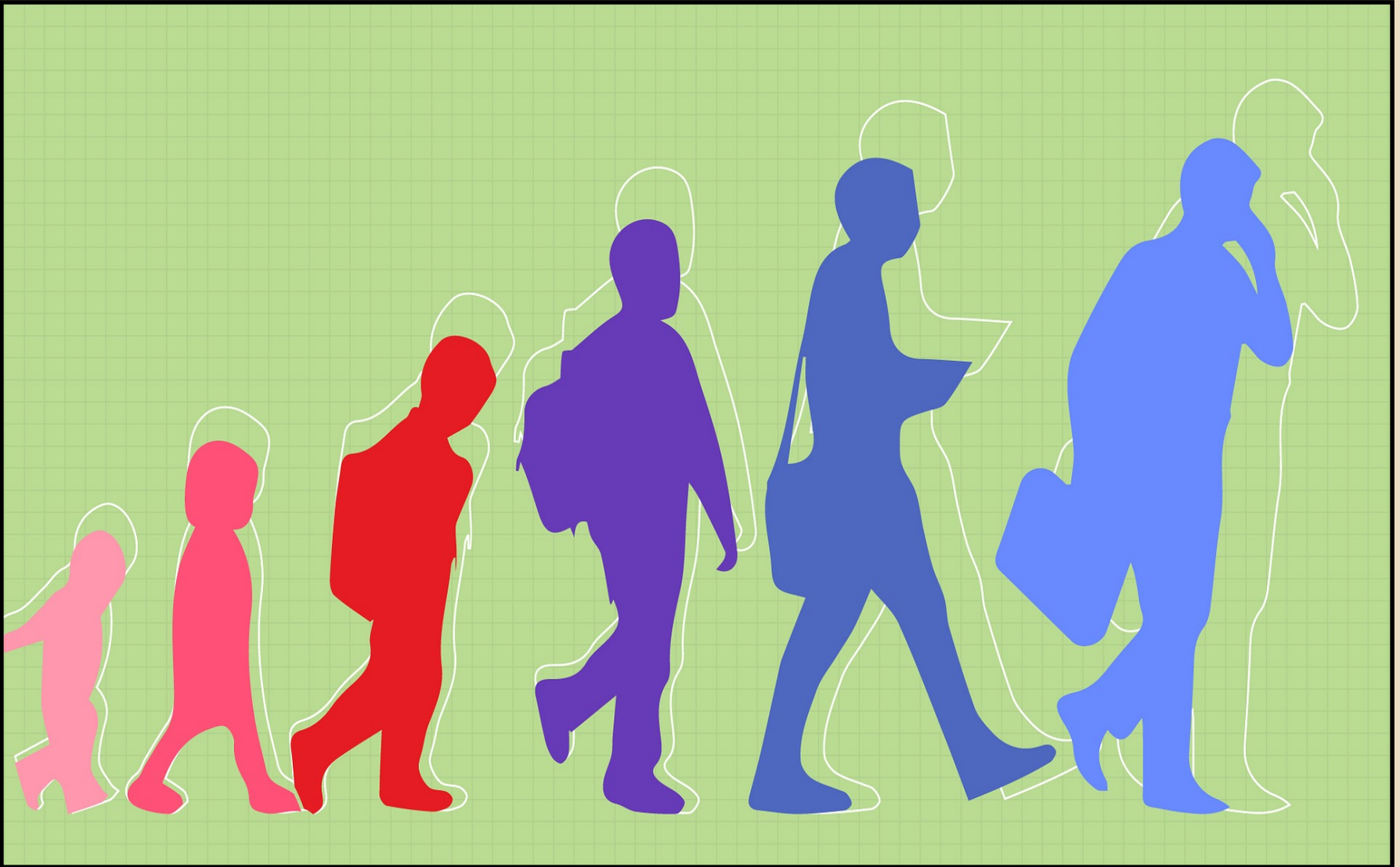
# Difference between Growth & Development

| Areas                | Growth                                                                                 | Development                                                                                          |
|----------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Meaning</b>       | Net increase in size due to multiplication of cells                                    | Change in body structure resulting into functioning                                                  |
| <b>Examples</b>      | Increase in height, weight<br>Growth of limbs and organs                               | The child develops skills in writing, reading, drawing, communicating etc.                           |
| <b>Aspects</b>       | More emphasis is on the physical aspect. Physical development is referred to as growth | It includes physical, cognitive, emotional, social and moral aspects.                                |
| <b>Measurability</b> | It is quantitative in nature, so measurable in various units                           | Qualitative in nature. It cannot be measured, but observed in terms of implications                  |
| <b>Age limit</b>     | Growth is limited up to a certain age. i.e. 17-18 years It stops at maturity           | It is throughout human life, from birth through old age<br>Development continues through experiences |

# Difference between Growth & Development

| Areas                       | Growth                                                                                                                                              | Development                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b><i>Inclusiveness</i></b> | Growth does not include development. But it has an impact on development, i.e. due to adequate growth in height and weight a child gains confidence | Development is a broad term. Growth is one aspect of development. It is an integrated concept comprised of many aspects. |
| <b><i>Scope</i></b>         | Growth may or may not bring development. I.e. Obesity                                                                                               | Development is possible without growth, i.e. a person may not grow physically, but functional progress is observed       |

# Stages of Development



# Stages of Development

There are five major stages of development:

- 1. Infancy and toddlerhood: birth to 2 years**
- 2. Early childhood: 3 to 5 years**
- 3. Later childhood: 6 to 12 years**
- 4. Adolescence: 13 to 19 years**

# **1. Infancy and Toddlerhood**

- Raising a child in a family is exciting and challenging at the same time.
- A child's life has to begin with bonding and attachment.
- It lays the foundation for the relationship between parents and the child on which self-esteem and self-concept are built in future life.
- It is a time when parents explore who this new person is.

## ***A. Physical Development during Infancy***

- There is rapid growth in height and weight from birth to two years.
- The head is the most noticeable part of the body of a newborn since it forms the highest proportion, which is 22% the height of the body.
- The proportion of the head to the body gradually decreases in infancy.
- Milk teeth appear from 6 to 7 months.
- The child's bones contain a great amount of water and smaller quantity of mineral matter as compared to an adult.
- The bones are softer and more flexible than adults. Therefore, parents need to be careful in handling the infant to avoid bone deformities and infection. The nervous system undergoes major development during first four years after birth

## ***b. Cognitive Development during Infancy***

- In the beginning, the child's sense organs are not developed, so he lacks in sensation as well as perception.
- When an infant starts focusing on bright by colored toys, lamps, moving objects, colored clothes, etc. that is the beginning of his perceptual growth.
- 'Object permanence' is an important milestone of cognitive development at 7-8 months. When an infant goes around and searches for a hidden toy.
- At the same time the child starts perceiving objects in a familiar environment.
- Based on the perception a child begins to form wrong concepts leading to the correct ones. i.e. All four legged animals are called as cows or goats as per his/her familiarity. All women are identified as mothers

### ***c. Emotional Development during Infancy***

- The infant cries, from the child's very birth and the bodily movements give evidence of the presence of emotions in him.
- The child's emotions can be seen through his simple responses that suggest pleasure and displeasure.
- Certain stimuli like loud noise, hot or cold water, hungry and uncomfortable feelings etc. bring unpleasant responses.
- In infancy the emotions are aroused by the conditions which are related to his well-being.
- The emotions are intense and expressed through crying, yelling etc.

#### ***d. Social Development during Infancy***

- At birth the child's behavior is not social at all.
- The child is self centered and concerned about satisfaction of physical needs.
- Due to the dependency on parents for the satisfaction of bodily needs, the first social contact is with parents, or caretakers.
- As Erickson has mentioned in his theory, if an infant gets pleasant social experiences trust is built, else mistrust develops that proves to be a risky foundation for child's further stages.

## 2. Early Childhood

### a. *Physical Development during Early Childhood*

- In early childhood, developmental changes occur in a relatively slower pace as compared to infancy.
- During this time the child loses his baby fat, legs grow longer, and the relation of head size to body size becomes more adult-like.
- The manner of walking becomes smoother gradually, also running and jumping become easier and balance improves.
- Eye-hand and eye-foot coordination improves hence can acquire skills like string beads, button large buttons, zip a zipper etc
- Some activities which depict fine motor skill development are
  - Using small muscles to draw, zip, cut with scissors, snap (break), tie and mold with clay
- Gross Motor Development is seen in activities like running, jumping, balancing, climbing, throwing and catching.

## ***b. Cognitive Development during Early Childhood***

- At this age children are capable of using symbolic thought to perform mental tasks like use of blocks for simple mathematical operations.
- According to Piaget's views, children lack the ability to operate on mental tasks in Mathematics and Geometry. Children at this age can talk in endless sentences, but are keen listeners when an interesting story is being told
- Their Span of attention is very small, hence need a change in activity every ten to fifteen minutes
- The child is able to use language and art to represent symbols. Drawings tend to be more realistic as the child progresses across the early childhood years.
- It is very common to use play to model roles and objects that they love to imitate teachers, mothers, police and other social figures.
- They can use inanimate objects to represent real objects like they often use the broom as a horse.

### ***c. Emotional Development during Early Childhood***

- They have a fear of dark places and overall darkness.
- Children tend to be impatient and selfish when it comes to sharing toys or other belongings.
- They express aggression through physical and verbal behavior without any inhibition.
- Their behavior shows signs of jealousy of siblings, especially aggressive behavior towards a new infant which may be prolonged indefinitely.
- Egocentrism at this stage results into failure to take others' perspectives is often observed at this stage.
- Stranger anxiety develops by age 2 ½ to 3 years and continues for a couple of years depending on their socialization.
- Most of the temper tantrums disappear by age 3. The habit of thumb sucking becomes a child's safety valve to release emotional pressure

#### ***d. Social and Moral Development during Early Childhood***

- This is the age when a child begins to develop self concept.
- The child can identify feelings of self and others and also feel empathy.
- He learns to manage and express emotions and therefore, can establish relationships.
- His dependency on parents is reduced with age, thus tolerates short separation. i.e. attends play school for a short time.
- Due to increased tolerance, he becomes more cooperative with playmates, thus can continue to play for a long time.
- By the age of 3, the child shows definite aggressive behavior. However, with the increase in age, there is a decrease of aggressiveness.
- Competition for prestige is apparent at the age of four years. By the age of six years, most children have a well developed competitive spirit.
- The signs of cooperative behavior appear sometimes when the child is about four years of age, whereas the co-operative group work is not understood before the age of six years.
- With increase in age the child strives for the social approval of others, first of adult and then of the members of his group

### 3. Later Childhood

- Later childhood is marked by conditions that profoundly affect a child's personal and social adjustments.
- The beginning of late childhood is marked by the child's entrance into first grade in school.
- This is a major change in the pattern of their lives.
- Entrance into first grade is a milestone in every child's life; therefore it is responsible for many of the changes that take place in terms of attitudes, value and behavior.

### **a. *Physical Development***

- This is the period of slow and uniform growth. Compared with the swift growth during the first five years, physical growth is slow but steady.
- So it looks stagnant overtly.
- Physical growth follows a predictable pattern, although variations do occur.
- This is the only time during the life span when girls are, on average, taller than boys.
- Height and weight variations can be affected by poor nutrition and racial or ethnic background.
- In this stage lengthening of the limbs occur. The legs grow very fast and children appear long legged.
- Muscle tissues increase and coordination improves, Involvement in physical activities increase.
- The bones are hardened; the height and weight increase at this stage and there is improvement in a child's motor development, skill and endurance.
- By the end of the late childhood stage, a child normally has twenty eight of the thirty two permanent teeth. The last four - the wisdom teeth emerge during adolescence

## ***b. Cognitive Development***

- Intellectual activities are clearly visible at this stage.
- The child is in a position to exercise his or her power of memory, attention, thinking and imagination and can solve problems intelligently.
- His knowledge and experience gradually takes the creative turn in the late childhood stage.
- The child is intellectually alive and active. I.Q. at this stage is developed considerably and by the end of this stage it becomes stable.

### ***c. Social Development and Moral Development in Late Childhood***

- The late childhood stage is also a stage of socialization of the egocentric nature of the child.
- The primary school provides an ideal situation for such socialization.
- The child's social environment and its functions are widened.
- Both the classroom and the playground situations train him how to feel, think and act together with others, share joy and sorrow with them.
- He also learns some of the social rules and norms through active participation in society.
- The child at this stage is engaged in social interaction and learns the spirit of sharing with others.
- They tend to have some definite rules of morality which depends on the perspectives of others.
- However, their moral thinking is not always reflected in their behaviour

#### ***d. Emotional Development***

- Children at this stage discover that the expression of emotions, especially the unpleasant emotions, is socially unacceptable to their age-mates.
- As a result, they acquire a strong incentive to learn to control the outward expressions of their emotions.
- Emotional expressions in late childhood are pleasant ones compared with the early childhood stage.
- A normal child at this stage believes in the sharing of love and affections.
- At this stage children also experience such emotions like - anger, fear, joy, anxiety, etc.
- The child's nature of behavior, thought and activity at this stage can be described as extrovert or external minded.
- He is more attracted to external situations and takes pleasure in active participation in them.
- He has no occasion to feel bored, anxious or worried over any problems of his personal life.
- The external world and its situations are extremely interesting and stimulating to him.
- He devotes all his energy and attention to them.

## 4. Adolescence

- It is the group of children from between the ages 13-19.
- WHO identifies adolescence as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19
- The term adolescence has its origin in the Latin verb 'Adolescere', which means to go into adulthood.
- Thus, it is the transition or bridge between childhood and adulthood.
- Adolescence is the period of rapid physical, cognitive, social, moral, sexual and emotional changes.
- It is an adjustment period with the parents, siblings, teachers and peers.
- It is the stage identified with dramatic changes in the body along with changes in psychology and entry into a new career.
- It is the period of human development during which a young person must move from dependency to independence, autonomy and maturity

### ***a. Physical Development***

- The stage is identified by rapid growth in height and weight.
- The nature of weight gain differs as it means muscle for boys and fat for girls.
- Girls mature about two years earlier than boys.
- The stage is identified with secondary sexual characteristics like growth of pubic and underarm hair, increased production of oil and sweat glands, change in voice for boys, facial hair growth in boys.
- Hormonal changes take place due to changes in the glands like the beginning of the menstruation cycle in girls.
- Teens frequently sleep more due to these changes, about 9-9.5 hrs.
- Often they feel awkward because of growth spurts. Some girls may become sensitive about their weight and try to lose weight resulting in eating disorders

## **b. Cognitive Development**

- In adolescence, changes in the brain interact with experience, knowledge and social demands and produce rapid cognitive growth.
- Cognitive development means the improvement in a child's ability to think and reason.
- Brain is not completely developed until late adolescence.
- Adolescents can take others' perspective and try to understand it.
- They can think about non-concrete things like faith, trust, beliefs, and spirituality
- From ages 12 to 18, children grow in the way they think. They move from concrete thinking to formal logical operations.
- Some children may be able to use logical operations in schoolwork long before they can use them for personal problems.

A child in late adolescence develops the following cognitive characteristics:

- Uses complex thinking to focus on less self-centered concepts and personal decision-making
- Has increased thoughts about more global concepts such as justice, history, politics, and patriotism
- Often develops idealistic views on specific topics or concerns
- May debate and develop intolerance of opposing views
- Begins to focus thinking on making career decisions
- Begins to focus thinking on emerging role in adult society

### ***c. Social Development***

- Need for age appropriate independence and freedom increases.
- Though they move towards more mental autonomy parental support is still necessary.
- Relationship with parents changes in three ways:
  - a) As cognitive ability increases, they look at the parents as individuals as well as parents. In short, they interpret relationship with parents rationally.
  - b) Less time is spent with the family and parents
  - c) More conflicts and arguments with parents

- More intimate relationships are developed with peers as they spend more time with them.
- They try to reason in adult terms about moral issues and values.
- They also question social and political beliefs of adults.
- With the world becoming a global village through increased communication has led to the emergence of a world youth community, resulting in two commonalities in the interest of adolescents across cultures such as style of dressing up, eating habits and music preferences.

#### ***d. Moral Development***

- They develop own view of the world.
- The ability to consider possibilities and facts may affect decision-making.
- This can occur in either positive or negative ways.
- Adolescents begin to form his or her own code of ethics For example, is it right to think in this direction?
- They also think about different possibilities and begin to develop their own identity, For example, he asks himself questions like who am I?
- Begins to systematically consider possible future goals and make own plans, for example questions arise like, What do I want in life?

### ***e. Emotional Development***

- Adolescents always struggle with a sense of identity therefore Erikson has named the stage as 'Identity Crisis'.
- So they have a tendency to return to childish behavior.
- Due to deviation in pattern of growth and development, they are often nicknamed by peers. i.e. A child who does not get hoarse voice or facial whiskers is nicknamed a girl.
- Their mood keeps on swinging at this stage.
- They develop an improved ability to express self.
- They express their views and feeling in cliques due to higher involvement.
- They show less overt affection towards parents and complaint about parental interference.
- It is very occasional with them to experiment with alcohol, cigarettes and drugs.



thanks  
for watching

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