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Directorate of Distance Education

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PRINCIPLES OF CHILD DEVELOPMENT

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INTRODUCTION

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Child development refers to the sequence of physical, language, thought and emotional changes that occur in a child from birth to the beginning of adulthood. During this process a child progresses from dependency on their parents/guardians to increasing independence. Child development is strongly influenced by genetic factors (genes passed on from their parents) and events during prenatal life. It is also influenced by environmental facts and the child's learning capacity.

All children have varying physical and emotional needs, depending on their age, personality, and developmental stage. As a child matures, they will go through phases where they explore their environment, learn verbal and reasoning skills, socialize with others, assert their independence from their family, etc. The various aspects of child development include the various stages of child development, the development of motor skills, language development and socio-emotional development.

This book, *Principles of Child Development* is divided into fifteen units that follow the self-instruction mode with each unit beginning with an Introduction to the unit, followed by an outline of the Objectives. The detailed content is then presented in a simple but structured manner interspersed with Check Your Progress Questions to test the student's understanding of the topic. A Summary along with a list of Key Words and a set of Self-Assessment Questions and Exercises is also provided at the end of each unit for recapitulation.

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BLOCK - I
GROWTH AND DEVELOPMENT

UNIT 1 OVERVIEW OF GROWTH AND DEVELOPMENT

Structure

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1.0 INTRODUCTION

Growth is defined as the physical change which a human being undergoes. On the other hand, development is defined as the overall growth of humans throughout their life course. Development is a process in which human beings change in terms of intellectual, physical, emotional and social aspects of growth.

The stages of development are primarily divided into two categories, namely, infancy and childhood. In the stage of infancy, the child becomes aware of the physical stages of growth during the first five years of life. In the stage of adolescence, children go through various changes such as emotional, physical and social. Psychologists study human growth which includes aspects such as physical, social, cognitive, intellectual, perceptual and emotional growth.

In this unit, the meaning of growth and development has been discussed. The unit will also explain the stages of infancy and childhood. The areas of development and the principles of growth and development have also been highlighted in this unit.

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1.1 OBJECTIVES

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

- Discuss the meaning of growth and development
- Analyse the process of development
- Interpret the stages of infancy and childhood
- Discuss the major areas of development in adolescence
- Identify the characteristics of emotions
- Explain the principles of growth and development

1.2 MEANING OF GROWTH

Growth and development have been interchangeably used by most of the developmental psychologists because both the processes are interrelated and interdependent on each other. It is difficult to differentiate the contribution of either of them in the development of the personality of an individual. However, some psychologists define growth as an indicative of increase in bodily dimensions; height and weight which are generally confined to quantitative changes. Arnold Lucius Gessell, an American child psychologist, wrote,

> . . . Growth is a function of the organism rather than of the environment as such: The environment furnishes the foil and the milieu for the manifestations of development, but these manifestations come from inner compulsion and are primarily organized by inherent inner mechanics and by an intrinsic physiology of development. The very plasticity of growth requires that there be limiting and regulatory mechanisms. Growth is a process so intricate and so sensitive that there must be powerful stabilizing factors, intrinsic rather than extrinsic, which preserve the balance of the total pattern and direction of the growth trend. Maturation is, in a sense, a name for this regulatory mechanism.

Development has been defined in a number of ways. Let us now look at some of the definitions of development given by renowned psychologists.

Development can be defined as the emerging and expanding of capacities of the individual to provide greater facility in functioning, such as development of motor ability from uncertain steps to proficiency in games. Development as a matter of fact is achieved through growth.

Development refers to interactions of a person and his or her environmental surroundings whose after-products alter existing response tendencies in such a way as to increase: their strength, the degree of differentiation, and the organisation of personality.

Development refers to those effects upon the person's cognitive–emotional systems which strengthen or enlarge one or more of them, increase

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their number or interrelate them in some different way. In brief, development is confined to qualitative changes in the organism.

The process of development has been explained from different points of view.

Some of them are as follows:

1. **Development as maturation:** According to the famous child psychologist, Arnold Gessell, the role of physical changes is important in the process of development. The development from infancy to adolescence is governed by physical changes that are mapped out in the individual's genes. For instance, a growing nervous system changes systematically and automatically and this results in predictable changes in bones and muscles. He used the term, 'maturation' to describe growth processes that are governed by such automatic and genetically determined signals. He believed that most of the major changes in the organism are based on maturation.
2. **Development as learning:** Donald M. Baer, a child psychologist and researcher has defined development as 'behaviour change which requires programming; and programming requires time, but not enough of it to call it age.' Programming refers here to sequences of learning which may happen naturally or may be arranged in the life of an individual. Development, in this view, is a collection of learning experiences which the child acquires in the process of interaction with his environment.
3. **Development as synthesis:** A Swiss psychologist, Jean Piaget says, 'For some psychologists development is reduced to a series of specific learned items and development is thus the sum . . . of this series of specific items . . . In reality development is the essential process, and each element of learning occurs as a function of total development rather than being an element which explains development.' According to Piaget, there are four basic elements in development, which are as follows: (i) Maturation; (ii) Experience; (iii) Social transmission (learning through language, schooling or training by parents); (iv) Equilibration.

Distinction between Growth, Development and Maturation

Growth refers to a process of becoming larger or longer or more numerous or more important, largely a physical change. Development, on the other hand, is a process in which something (mostly positive) transforms into a different stage or improves. Growth and development are two words in the English language that can be used with some difference, although they appear to have the same connotation. Growth is taken to mean an increase in the size

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of an object or a living being. 'The lump as grown in size' is an example of its usage. Development is taken to mean an improvement in the level of functioning. 'He developed into a nice officer' is an example of its usage.

Development may mean a kind of improvement in the condition of health. 'He developed a better pulse rate now' is an example. Growth describes the process of growing. 'There was a rapid growth in the economy of the country' is an example. It indicates an increase in value. 'There was a growth in the number of hospitals in the city.' Growth can mean an increase in a crop or yield of some fruit for that matter. 'The farmer was amazed with the tremendous growth of grapes'. Development may mean a process of gradual transformation. One can use the word 'development' to suggest a process of developing.

Maturation and development

Development is experiential change. It is orderly, adaptive and durable changes that occur throughout our life. Maturation, on the other hand, is naturally occurring change that is genetically controlled. Some developmental changes are considered maturational, or indicators of physical maturity. Maturation is the progression of developmental changes toward the characteristics of adults. Physical maturation occurs from the time of conception, but some of the most commonly recognized indicators of maturation become apparent during adolescence. Changes in body shape, breast development in girls, and pubic hair development in both genders and development of facial hair in boys are visible indicators of maturation toward adult appearance of the body. The cessation of the growth of long bones, associated with the final attainment of adult stature is also a maturational event.

Although growth and maturation are certainly related, however, distinguishing between them is important because some physiological and hormonal processes affect growth and maturation differentially, as do some diseases. It is easy to observe that children of the same size can differ in maturational status and that fully mature individuals (adults) can be of different sizes.

Nature versus Nurture

The nature versus nurture debate concerns the relative importance of an individual's innate qualities versus personal experiences in determining or causing individual differences in physical and behavioural traits. The view that humans acquire all or almost all their behavioural traits from 'nurture' is known as *tabula rasa* ('blank slate'). This question was once considered to be an appropriate division of developmental influences, but since both types of factors are known to play such interacting roles in development, many modern psychologists consider the question naive—representing an outdated state of knowledge.

In the social and political sciences, the nature versus nurture debate may be contrasted with the structure versus agency debate (i.e., socialization versus individual autonomy).

Check Your Progress

1. What do you understand by the term 'programming'?
2. How is development different from maturation?
3. What are the four basic elements of development?

1.3 STAGES OF DEVELOPMENT

The following are the major stages of human development:

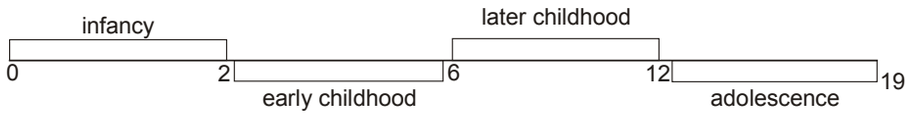

Fig 1.1 *Different Stages of Development*

In this section, we will learn about infancy, early childhood and later childhood.

Stage of Infancy

Infancy is a time of intense development. Babies start out with little more than instinctual reflexes and an innate ability to learn. Over the course of two years, they progress to the point where they have recognizable personalities; are able to move themselves from place to place; and understand how certain important aspects of the world operate (such as object permanence; the understanding that objects continue to exist even when you are not looking at them). They understand the basics of how to make their wishes known, have formed attachments and relationships, and have learned basic ways of managing their emotions and impulses.

Dimensions of Development at Early Childhood Stage

At the early childhood stage, children witness different types of development. They are as follows:

- **Physical development:** Growth in physical dimension during the period of 2 to 6 years of age is not as accelerated as that experienced in infancy. The child begins to assume the body proportions of an adult. The growth in legs is rapid and the legs represent about half of one's total height. The head growth is slow and trunk growth is intermediate. Generally, the weight of a three-year-old male child is about 33 pounds

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and is 38 inches tall. The girls are a bit lighter and shorter. By the age of five years, the average height for boys is 43 inches and the average weight is 43 pounds. The height and weight are affected by a number of variables, such as height of parents, nutrition and illness.

In addition to size and weight, the child undergoes other physical and physiological changes. The muscles develop at a very rapid speed. Larger muscles are far better developed than the smaller and finer ones. Physiological changes occur in respiration, heart rate slows down and blood pressure goes up steadily. Brain has developed 90 per cent of its adult weight. Nerve fibres in the brain areas come close to maturity level by the end of pre-school period.

- **Perceptual development:** The child in early childhood develops a variety of motor skills which are repeated. Self-feeding, self-dressing, bathing, brushing the hair, playing with toys, using pencils, jumping and hopping develops at the age of 5 to 6 years.

  The perceptual development begins from mass movements to differentiation and integration. Table 1.1 lists the norms for children from 2 years to 5 years of age.

Table 1.1 *Developmental Norms (Bulher, GessellTerman)*

Motor	2 years	3 years	4 and 5 years
Development	Walks without help, jumps, runs.	Skips, hops	Free and active movement, responds to music.
Fine motor coordination	Copying.	Can match shapes, sees similarities and differences	Can name colours.
Perceptual	Identifies self, matches colours.	Can fit nets, boxes.	Matches shapes and colours, distinguishes names.
Vocalization	200 words, uses few words.	900 words, follows commands.	Can repeat 4 digits—2000 to 3000 words, can define familiar words.
Adaptive behaviour	Bowel control.	Builds blocks, can draw a man.	4 digits, draws body with details.

- **Language development**: The language development of the infant begins from birth cry. The ten-month-old child is able to use one word but by the end of the first year, his or her vocabulary increases to 3 or 4 words. Good home environment and early childhood training help in the development of vocabulary. It has been reported by several studies that there is positive correlation between intelligence and language development.

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- **Intellectual development:** The intellectual development of the child is accelerated after the age of two because now he or she begins to explore his or her social environment and acquires new experiences.

  The following are the major characteristics of intellectual development:

  a) Child begins to form concepts of physical and social reality; by the age of six the child develops perception of size, shape, colour, time and distance; Memory increases at a very rapid speed. The child can learn by rote memorization; Creativity develops in children and imagination begins to grow; Thinking and reasoning develops in relation to concrete material; Span of attention increases from seven minutes to twenty minutes and interest in exploring the environment increases; The child is now able to use symbols in language, draw symbolic play and engage in problem solving; The child asks questions about his or her environment.

- **Social development:** A child is born in a social environment where his or her personality development is shaped in accordance with the norm of the society:

  Sense of trust and mistrust develops in children themselves and their environment; Feeling of autonomy develops in children. They begin to explore their environment independently; Social environment expands beyond home; Children of both sexes play together without any discrimination. They actively participate in group games in which physical energy is used such as hide and seek; They learn to cooperate with others and make friends on shared interests and similar personality traits; Children take interest in fairy tales and animal stories; Negativism increases between the years three to six. It is a product of social situations. It is said that the more the child is frustrated by adult interference, the more negativistic his or her behaviour will be; Girls are more dominating than boys in play situations; The child seeks social approval of his or her action.

- **Emotional development:** Emotions play an important role in life and contribute in the personal and social adjustment of the individual, however, provided that they are directed into wholesome expression. Emotions have the following effects on the developing individual: Emotions give us energy to face a particular situation in life; They work as motivators of our behaviour; Emotions add pleasure to our everyday experiences in life; They maintain our interest in work; They influence our adjustment in the society; Highly emotional conditions disturb our mental equilibrium; our reasoning and thinking are disrupted; Emotions serve as a media of communication between individuals and guide the individual to modify in order to conform to the social standard; Emotional deprivation leads to personality maladjustment.

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Characteristics of Emotions

The characteristics of emotions are as follows:

- Emotions are frequent.
- They are expressed in relation to the concrete objects.
- They are temporary. It means that the child shifts his or her emotions very rapidly. For instance, a child of 3 years who is weeping, if given a toffee, will become happy.
- Emotional expressions in early childhood are intense irrespective of the intensity of the stimulus.
- Children fail to hide their emotions but express them indirectly through different activities as crying, nail-biting, thumb-sucking and speech difficulties.
- Emotions change in strength. Emotions which were very strong at a certain age become weak as the child grows while others which were weak become stronger. This change may be due to change in drive strength, child's intellectual development and changes in interests and values.

Stage of Childhood

Later childhood is an important phase of life. A child psychologist, Fritz Redl has characterized this period as the time 'when nicest children often begin to behave in the most awful way'. The parents and teachers are annoyed with children and vice versa. It is a period which requires proper guidance and counselling by parents and teachers for the adequate adjustment of children in the society.

Different types of development during later childhood are discussed as follows:

Physical development

There is slow increase in weight and height during late childhood. Girls are ahead of boys by two years. Changes are shown in all general proportions of the body. Children are free from diseases at this age. Physiologically, the girls at the age of 11 are a full year ahead of the boys. Shedding of milk teeth and growth of permanent teeth changes the appearance of mouth; flattening of forehead, sharpening of the nose, broadening of the chest, and motor skills develop through play.

The following are the marked physical changes during the later childhood stage.

- Increased manual dexterity
- Increased strength

- Increased resistance to fatigue
- Increased accuracy and endurance in relation to games

Intellectual development

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The following changes in the intellectual development occur during the period of six years to twelve years of age.

- The child begins to make clear distinction between himself or herself and the outer world. He or she seeks reality in his or her environment.
- The concept of natural laws becomes almost fully developed by12 years of age.
- It is the time for eager absorption of information and accumulation of ideas. Learning and memory becomes more efficient because the child enters formal schooling.
- Capacity for logical thinking increases. The child becomes increasingly efficient in selecting, developing and applying cognitive operations in relation to concrete objects.
- Interest in science stories and mechanical operations reaches its height at this age.
- Courage and loyalty increases. Children show courage in doing things.
- Imaginative plays are given preference to.
- Use of reading of factual material, scientific and mathematical information and fiction, with a realistic theme increases.
- Use of causal relationship in thinking about physical, mechanical and natural phenomena in the environment increases.
- Early imaginative fears disappear by the age of 12.
- High ability to generalize is shown by children of ten to twelve years of age. Children are more concerned with immediate cause-and-effect relationship and current happenings.
- Flavell (1977), a child psychologist, has suggested that the mind of the child during this period has a better general understanding of problems. He or she has a much better sense of what a conceptual problem is. He or she can rationally analyse a problem. He or she is able to deal with the environment in a flexible, efficient and symbolic manner. He or she has at his or her disposal a set of operations or rules that are logical although concrete.

Emotional development

Emotions are very important for life. Without emotions life becomes monotonous and dull. They change with the age of the child.

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The following are the characteristics of emotional changes during this period:

- Early pattern of emotional expression changes. By the end of late childhood, the child learns to control his or her emotional expression in social situations.
- The emotional responses of the child become less diffuse, random and undifferentiated.
- Emotions are expressed even in the absence of concrete objects.
- Emotions are most contagious during childhood, because children are highly suggestible and dependable on others.
- Early childhood fears of animals, high places and noise disappear and fear of supernatural, imaginary creatures, fear of failing, being ridiculed and being different appear.
- Anger is caused by thwarting, teasing, making unfavourable comparisons with other children, interruption of activities in progress, ridicule by peers or elders, and negligence.
- Parental favouritism causes jealousy in childhood.
- Girls are more jealous than boys in their classes because of preferential treatment given to boys.
- Joy, pleasure, love, curiosity, grief and affection appear in childhood.

Social development

The process of socialization confines to home and neighbourhood environment in early childhood but as the child enters school his or her social circle widens.

The following are the major changes:

- It is the period when children form peer group of their own sex and remain outside the home. Peer group becomes an important agent of socialization.
- It is the period of peak unruliness in school and home.
- Complaints of disobedience are highest in percentage during this period.
- Children reject adult standards and circle of friends widens.
- Delinquency begins more during this period than adolescence.
- Sex differentiation becomes sharp. Girls play with girls and boys play with boys. There is sex difference in play activities. Girls are more antagonistic towards boys.
- Boys are more rebellious than girls and their groups are more organized than the groups of girls.

- Children take interest in group games. Boys and girls form their own groups. Group consciousness develops and the child becomes less selfish, self-centred and aggressive but more cooperative and outgoing.
- Social consciousness develops very rapidly. It is called 'gang age' period when the child associates himself or herself with the peer group of the same age who feel and act together. The child shows great loyalty to his or her gang. He or she conforms to the stand of his or her gang.

Check Your Progress

4. What are the main characteristics of emotions?
5. Why is it believed that emotions change in strength?

1.4 AREAS OF DEVELOPMENT

Let us now discuss the different areas of development.

1.4.1 Physical Development

The most important single feature of adolescent development consists of the changes that take place in the young person's body. In adolescence, marked physical changes take place which have significant behavioural implications.

Physical features in adolescence may be discussed under the following heads:

- **Change in height:** Almost all boys and girls show a spurt in growth during adolescence which is preceded and followed by years of comparatively little increase. There is a sudden shoot-up in growth in height. There are sex differences in height and weight. In infancy boys surpass girls. At the age of 13, girls are taller and heavier than boys but by the age of 15 boys are taller and heavier than girls.
- **Changes in bodily proportion:** There is general change in the proportions of various bodily parts. The different parts of the body grow at different rates and attain their maximum development at different times. The pelvis bone of girls broadens and their wrist becomes circular. The arms and legs grow in length and become finer. Boys develop round shoulders.
- **Voice:** Change of voice in boys is a commonly recognized feature of adolescent development. This change does not occur at a fixed age or even at any fixed time in relation to pubertal changes. The voice of boys

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become hoarse and girls' voice becomes sweet during adolescence. The change of voice, sometimes, has notable effects on the behaviour of adolescents.

- **Secondary sex characteristics:** The secondary sex characteristics develop during adolescence. Genital organs in boys grow in size. Testes usually grow earlier. In girls, sex organs acquire maturity. The growth of breasts and the widening of the pelvis in girls are among the physical development that has significant influence on the adolescent girls' conception of her physical self.
- **Hair growth:** Change in hair growth is associated with puberty. In case of boys, hair appears on upper limbs and beard; pubic hair and hair in armpits appear in both boys and girls.
- **Physiological changes:** All internal systems such as respiratory, circulatory, digestive, blood pressure, heart and pulse-rate acquire their full growth. Brain is fully developed by the age of 18.
- **The age of menstruation:** The data on menarche has been collected in all parts of the world. It is generally believed that girls in tropical and sub-tropical countries mature earlier than cold countries. The average age of menstruation varies from 13 to 16 years.
- **Relationship between physical and mental growth:** It has been shown that the interests and behaviour patterns of children are closely allied with their pattern of physical and physiological development. Physical development has a psychological effect on his or her attitudes regarding himself or herself and on the attitudes of others toward him or her. The physical development is an important factor in social development and approval. If the girl is ugly and under-developed, she tries to avoid social situations. If the boy is physically handicapped or has some minor physical defects then definitely his intellectual and social developments are affected.
- **Physical activity and ability:** The capacity to perform physical activities increases rapidly in adolescence.
- **Changes in strength speed:** There is a great increase in muscular strength in adolescence. The adolescents become more active in their work. Girls seem to mature earlier than boys in physical activity.
- **Growth trend in motor performance:** Psychologist, Espenschade conducted a study on boys and girls for a number of years on tests on running, throwing a ball and jumping. There was great difference in the performance of boys and girls. Boys are better. The boys are superior, particularly in activities which involve speed and muscular strength. Boys continue their interest in physical activities while there is sharp decrease in the interest of girls. There is a sharp increase in jumping

and throwing events from 13 to 16 years. Many of the sex differences in motor and mechanical activities are not due to a genuine sex difference as to a difference in amount of interest, experience and practice.

There is a close relationship between motor performance and other traits. Popularity in adolescence is closely related to physical strength and skill in athletic activities than to intelligence and school achievement. The cluster of physical traits as physical skills, bravery and strength show a high relationship in social situation and heterosexual relations. These findings emphasize the importance of physical education and recreational activities for adolescents. The boys who have poor athletic abilities have poor social adjustment. They develop tension and conflict arising from inferiority.

1.4.2 Mental/Cognitive Development

All studies on the mental growth have reported that mental abilities increase with age. Mental development during adolescence accelerates on many intellectual fronts. The following are the characteristics of mental development in adolescence:

- **Increased ability to generalize the facts:** Children usually generalize in relation to concrete objects. The intellectual development in childhood operates on a perceptual level but in adolescence the ability to generalize on conceptual level develops. The adolescent can generalize in an abstract way.
- **Increased ability to understand:** There is an increase in the ability to see relationship and to solve problems of increasing complexity and difficulty. His or her depth of understanding develops.
- **Increased ability to deal with abstraction:** The adolescents can think not only in general terms but also in abstract terms to a greater degree than children. They can think in terms of symbols rather than concrete things. Ability to carry on abstract thinking is not something that suddenly develops in adolescence. It is relative. This ability to comprehend and to communicate meanings in abstract qualitative concepts is an important aspect of intellectual maturity in adolescents.
- **Development of memory and imagination:** The memory in adolescence develops tremendously with the growth in vocabulary. The adolescents can imagine about a situation which is not physically present before them. Their long-term memory increases. They can retain facts for a longer period. They can anticipate future needs and can plan for it.
- **Growth away from trial and error method:** Trial and error is the primitive method to solve problems. During adolescence, an individual develops the capacity to cope with the situations through manipulation of pertinent factors. Teachers should encourage adolescents to develop

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the habit of substituting thought for trial and error method of solving problems.

- **Ability of problem solving:** The ability to solve problems increases in adolescence. Adolescents can solve problems with the help of symbols. They can deal with ideas that do not represent something in which a person is directly involved. They are able to deal mentally with events in a world that extends far beyond their own immediate sphere of activity.
- **Increased ability to communicate with other persons:** The adolescents on roads, in coffee houses, and tea stalls can be seen arguing for hours on topics of their interest.
- **Identification with conditions and characters in the larger world:** Another important change in intellectual orientation that takes place near the beginning of adolescence appears in the child's ability to identify with the circumstances and people outside his or her own immediate environment.
- **Ability to make decisions:** The individual has to make many decisions in his or her daily life. Decision-making ability is necessary for successful adjustment in life. During adolescence, we expect the growing child to gain increasing confidence in his or her own opinion. There is a certain amount of independence in thinking, a certain freedom in exploring and in weighing alternatives that is involved in the kind of maturity that enables one to make decisions on his or her own.
- **Understanding of moral concepts:** The child, without questioning the validity of moral training, obeys the moral code framed by parents, but as he or she enters adolescence he or she critically examines the moral code and asks a number of questions.
- **Self-criticism and evaluation:** Adolescents begin to evaluate their performance objectively but majority of adolescents do not achieve the mental maturity to do so. They either overestimate or under evaluate their performance.
- **Increased rational self-control:** Adolescents show more intellectual maturity to do a thing. They achieve rational self-control which is promoted by good mastery of developmental tasks which develops the sense of achievement and duty in them.

1.4.3 Emotional Development

C T Morgan, a renowned psychologist, emphasized on the importance of emotions in life; writes that emotions are basic, primeval forces of great power and influence designed by nature to enable the organism to cope with

circumstances which demand the utmost effort for survival or success or to add colour and spice to our living. If there had been no emotion in life of the organism, life would have been without any aspiration. In absence of emotions, social and family life would have ceased and progress would have been checked. The word emotion has been derived from the Latin word 'emovere' which means 'to move out'. Emotion may be defined as the stirred up condition of the organism involving internal and external changes in the body. It is expressed in love, fear, anger, laughter and tears. It involves feelings of jubilation or depression and impulse to action and awareness of perception.

Basically, human beings are creatures of feelings or emotions. Our emotions control our behaviour. Emotion in the organism is a dynamic internal adjustment that operates for the satisfaction and welfare of the individual. Adolescence is marked by heightened emotionality.

Causes of Heightened Emotionality

The following factors are responsible for increase in emotionality:

- Change of roles in home, school and society
- Unfavourable relations in home
- Social expectations
- Difficulty in adjustment to the member of opposite sex
- Religious conflicts
- School failures
- Conflicts with friends and family members
- Vocational problems

Characteristics of emotions in adolescence

The characteristics of emotions in adolescence are as follows:

- **Complexity:** By the age of stepping into adolescence, a child experiences a number of emotional upheavals and storms. His or her emotional development becomes complex by his or her experiences with his environment. The adolescent learns to conceal his true emotional experience.
- **Development of abstract emotion:** Generally, children show emotional expression in relation to concrete objects but adolescents can express their emotional feelings in relation to objects which are abstract or which are not present in concrete form.
- **Widening of Emotional feelings:** As the child grows, he or she starts taking account of the past and imagines the future and thus, one can expect him or her to become more patient and able to tolerate delay. He or she gets pleasures from what he or she expects in future. The sphere

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of his or her social relation increases. He or she starts appreciating elder and younger people.

- **Bearing of tensions:** Adolescents develop competencies to bear the tensions in different social situations. The emphasis is on self-control. They feel a kind of inner freedom—freedom to feel and experience in an intimate personal way.
- **Capacity of sharing emotions:** In childhood, children are not able to control their emotions. Sharing of emotional experiences reaches its fullest development when an adolescent is able to relate himself or herself to another person in such a way that the satisfaction of the person is just as important as his or her own. It means he or she begins to love his or her neighbours as much as himself or herself.
- **Expansion of Loyalties:** Emotional development begins from the home environment of the infant and during adolescence it is expanded beyond home and neighbourhood. These loyalties are identified with peers and leaders of various fields.
- **Realism in emotional experiences:** Now the child enters the period of reality. An adolescent can perceive and appreciate people around him or her. He or she recognizes the weakness and strength of one's character.
- **Reviewing of hopes and aspirations:** Adolescence is the period of life when one has high hopes and aspirations for his future life. Some adolescents work realistically to achieve their expectations and others do little to realize their hopes; they remain in illusion, and in the world of day-dreams and flights of fancy which make them unrealistic.
- **Toleration of aloneness:** The adolescents develop a feeling of loneliness. Sometimes they like to be alone in their home.
- **Externalization of feelings:** The adolescent learns to externalize his or her feelings in the various situations of external environment he or she moves in. He or she can project his or her feelings on others.
- **Increased compassion:** Compassion means fellowship of feeling. It denotes an ability to enter into kinship with the feelings and impulses involved in any sort of emotional experience, whether it is joy or sorrow. To be compassionate means that a person is able to enter his or her own feelings and appreciate the emotional feelings of others.

Effects of emotions

Emotions have a profound effect on the life of an individual. They can make or mar one's life. There are two types of effects of emotions which are described in the following section.

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1. Good effects of emotions

The following are the good effects of emotions:

- Source of motivation
- Source of enjoyment
- Source of strength and endurance to body
- Media of communication

2. Bad effects of emotions

Emotions also have damaging effects on the behaviour of an individual. The most damaging effect of emotions is on the physique of the individual. Constant emotional tension may cause lack of sleep, restlessness, headache, chronic fatigue, insomnia and lack of appetite.

1.4.4 Social Development

During adolescence, the following changes in social behaviour occur:

- The most marked change in adolescence is the place of the adolescent in family. In India, a special ceremony is held to celebrate the entry of child into a new social role. Parents' attitude changes and now they assign him or her social responsibilities. He or she is taken into confidence on important matters of the family.
- The circle of adolescent narrows down to a small group. His or her interests become specialized.
- Adolescents start identifying himself or herself with adults and try to do roles of the adult.
- In childhood, boys play with boys and girls with girls: while in adolescence there is heterosexual trend in companionship. The adolescent boys and girls form their groups based on their common interests and goals. The social group of boys are larger than girls because boys in our society have more freedom than girls. However, recently in big cities, a new trend toward giving more freedom to girls is emerging as a new social pattern among adolescent girls. The adolescent boys and girls have a variety of grouping such as chums, clique.
- Adolescents make friendship with those who conform to their standard and possess the personality traits they like. The number of friend's decreases but the affiliation becomes more permanent. There is interest to make friendship with the members of the opposite sex. The adolescent does not tolerate the interference of parents and other members in selecting friends. Sometimes because of his immature

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decision, he is bluffed in selection of friends. The friendship of this period tends to be permanent.

- To appraise social interests. The teacher should make an appraisal of student's social interests, social acceptance in classroom, socio-economic conditions and organize activities to foster socialization.

1.4.5 Moral Development

The term *moral* is derived from the Latin word *mores* meaning manners, customs and folk ways. Morality is indissolubly linked with the social system. The child has to learn what is *good* and what is *bad,* what is *right* and what is *wrong.* He or she has also to learn his or her *duty.* All these terms imply clearly that morality has reference to social relationship and social process. Morality has two dimensions which are closely interlinked. (i) The rules of morality operate in the social context. (ii) It is used to mean the pursuit of good life—personal moral code.

Dimensions of Moral Development

Baqer Mehdi and B P Gupta in an NCERT publication entitled, *Psychology of the Child and Curriculum* (1983) observe, 'Moral development of the child implies inculcation in the child a number of qualities for which curriculum provides ample opportunities'. According to them, following are some of the important moral qualities which need to be attended to in schools:

Honesty in words and deeds; Truthfulness; Self-respect and a desire to respect others; Righteousness; Self control; Duty consciousness; Compassion.

Piaget's Views on Moral Development

Jean Piaget (1932), a Swiss psychologist used the interview method to find out the various stages of moral development of the child. According to him, there are four stages: (*i*) Anomy the first five years (*ii*) Heteronomy - Authority (5-8, years) *(ii)* Heteronomy - Reciprocity (9-13 years) and *(iv)* Autonomy -Adolescence (13-18 years).

1.4.6 Principles of Growth and Development

The following are the fundamental principles of growth and development:

1. **Development is a product of the interaction:** Development is a process resultant from a constant flux or interchange of energy within an organism and his or her environment. Hereditary forces inherent in the genetic constitution of the individual and environmental forces influence the development of the organism. It is very difficult to distinguish the contribution either of the two forces. An individual is a by-product of the constant interaction of the individual with his environment.

2. **Development follows an orderly sequence:** Individuals differ in rate of growth and development. However, development follows an orderly sequence in all individuals and shows high degree of similarity in the order in which various developments appear. Psychologists have reported several directional trends in the development. Following are the main trends:
   (*i*) **Cephalo caudal:** Development starts from head and proceeds towards heel.
   (*ii*) **Proximodigital:** Development starts from the centre line of the body to the outer parts, more distant, from it.
   (*iii*) **Locomotion:** Locomotion develops in a sequence in all infants of different cultures of the world. The sequence is creeping, crawling and walking.
3. **Development is a continuous process:** Development begins from the time of conception in the womb of the mother and continues till maturity. But it should be kept into consideration that it is not always smooth and gradual. There are spurts in physical growth and psychological functioning as increase in height and weight, sharp rise in vocabulary during pre-school years and sudden improvement in problem-solving abilities during adolescence.
4. **Bilateral to unilateral trend:** The new-born infant is essentially a symmetrical organism anatomically, physiologically and functionally. This functional symmetry is revealed in the early motor development. The infants up to the age of 2.5 years use both the hands with equal ease. The hand preference starts after the age of two-and-a-half year.
5. **Different aspects of development are interrelated:** Different aspects of development are interrelated and interdependent. A child's early social behaviour is interrelated with his or her physical development. If the child is physically handicapped, then his social behaviour will be retarded. The motor development of walking has positive effect on the intellectual development of children. Thus, we see that different types of developments are interdependent and help each other.
6. **Development is an individualized process:** All individuals develop in their own way. Each child has his own rate of physical, mental, emotional and social development. If we observe six-year old children, we find great differences in their height weight and social, emotional and learning readiness. Even at different ages, children have different rates of development. The rate of growth is very high in infancy and then it slows down and continues throughout one's life. Growth may occur by fits and starts, meaning thereby that the rate of growth changes at different stages of a child's development.

7. **Development is cumulative:** Development is a cumulative process. Certain changes impress the observer with their dramatic suddenness but actually these changes do not emerge all of a sudden. The child's first word, first step and so on are the results of cumulative progress as the child has continuously been preparing for these functions. Each change is the culmination of his or her prior growth and experience.
8. **Development proceeds from the general to the specific:** In all types of developments, we find the principle of mass differentiation and integration. The world at the time of birth is a big buzzing, blooming confusion for the child. Out of mass and undifferentiated behaviour emerge more differentiated, refined behaviour and goal-directed response. We can take any development and find that this principle applies. For example, language development of the child begins from the birth cry, as mass response. Out of this mass response, differentiation starts and gradually, the child acquire vocabulary of many words and consequently the skill of communication develops.
9. **Rate of development differs in male and female children:** There is a difference in the growth rate of boys and girls. Girls mature earlier in comparison to boys. Girls are taller and heavier than boys during pre-adolescence but by the end of adolescence boys surpass them.

Check Your Progress

6. What are the factors responsible for causing increase in emotionality?
7. Why is development a cumulative process?
8. What are the two main dimensions of morality?

1.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Programming refers here to sequences of learning which may happen naturally or may be arranged in the life of an individual.
2. Development is experiential change. It is orderly, adaptive and durable changes that occur throughout our life. Maturation, on the other hand, is naturally occurring change that is genetically controlled.
3. The four basic elements of development are (i) Maturation; (ii) Experience; (iii) Social transmission (learning through language, schooling or training by parents); (iv) Equilibration.
4. The following are the main characteristics of emotions:
   (a) Emotions are frequent.

(b) They are expressed in relation to the concrete objects.

(c) They are temporary. It means that the child shifts his or her emotions very rapidly. For instance, a child of 3 years who is weeping, if given a toffee, will become happy.

(d) Emotional expressions in early childhood are intense irrespective of the intensity of the stimulus.

5. Emotions change in strength. Emotions which were very strong at a certain age become weak as the child grows while others which were weak become stronger. This change may be due to change in drive strength, child's intellectual development and changes in interests and values.
6. The factors responsible for causing increase in emotionality are as follows:
   (a) Change of roles in home, school and society
   (b) Unfavourable relations in home
   (c) Social expectations
   (d) Difficulty in adjustment to the member of opposite sex
   (e) Religious conflicts
   (f) School failures
7. Development is a cumulative process. Certain changes impress the observer with their dramatic suddenness but actually these changes do not emerge all of a sudden. The child's first word, first step and so on are the results of cumulative progress as the child has continuously been preparing for these functions. Each change is the culmination of his or her prior growth and experience.
8. The two main dimensions of morality are (i) The rules of morality operate in the social context. (ii) It is used to mean the pursuit of good life—personal moral code.

1.6 SUMMARY

- Growth and development have been interchangeably used by most of the developmental psychologists because both the processes are interrelated and interdependent on each other.
- Development can be defined as the emerging and expanding of capacities of the individual to provide greater facility in functioning, such as development of motor ability from uncertain steps to proficiency in games.

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- Development refers to those effects upon the person's cognitive–emotional systems which strengthen or enlarge one or more of them, increase their number or interrelate them in some different way.
- Donald M. Baer, a child psychologist and researcher has defined development as 'behaviour change which requires programming; and programming requires time, but not enough of it to call it age.'
- Programming refers here to sequences of learning which may happen naturally or may be arranged in the life of an individual.
- According to Piaget, there are four basic elements in development, which are as follows: (i) Maturation; (ii) Experience; (iii) Social transmission (learning through language, schooling or training by parents); (iv) Equilibration.
- Growth refers to a process of becoming larger or longer or more numerous or more important, largely a physical change.
- Growth and development are two words in the English language that can be used with some difference, although they appear to have the same connotation.
- Development is experiential change. It is orderly, adaptive and durable changes that occur throughout our life.
- Maturation is the progression of developmental changes toward the characteristics of adults.
- Although growth and maturation are certainly related, however, distinguishing between them is important because some physiological and hormonal processes affect growth and maturation differentially, as do some diseases.
- The nature versus nurture debate concerns the relative importance of an individual's innate qualities versus personal experiences in determining or causing individual differences in physical and behavioural traits.
- Infancy is a time of intense development. Babies start out with little more than instinctual reflexes and an innate ability to learn.
- Growth in physical dimension during the period of 2 to 6 years of age is not as accelerated as that experienced in infancy.
- The intellectual development of the child is accelerated after the age of two because now he or she begins to explore his or her social environment and acquires new experiences.
- Emotions play an important role in life and contribute in the personal and social adjustment of the individual, however, provided that they are directed into wholesome expression.

- The process of socialization confines to home and neighbourhood environment in early childhood but as the child enters school his or her social circle widens.
- There is a close relationship between motor performance and other traits. Popularity in adolescence is closely related to physical strength and skill in athletic activities than to intelligence and school achievement.
- The ability to solve problems increases in adolescence. Adolescents can solve problems with the help of symbols.
- Emotion in the organism is a dynamic internal adjustment that operates for the satisfaction and welfare of the individual. Adolescence is marked by heightened emotionality.
- Development is a process resultant from a constant flux or interchange of energy within an organism and his or her environment.

1.7 KEY WORDS

- **Development**: It refers to the process of emerging and expanding of capacities of the individual to provide greater facility in functioning, such as development of motor ability from uncertain steps to proficiency in games.
- **Emotion**: It refers to the stirred up condition of the organism involving internal and external changes in the body.
- **Growth**: It refers to an indicative of increase in bodily dimensions; height and weight which are generally confined to quantitative changes.
- **Maturation**: It refers to the progression of developmental changes toward the characteristics of adults.

1.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. Differentiate between growth and development.
2. What is perceptual development?
3. What are the characteristics of intellectual development?
4. Write a short note on the relationship between physical and mental growth.

5. What are the changes related to social development?
6. List the main characteristics of emotional changes during the period of childhood.

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Long Answer Questions

1. Explain the process of development.
2. Discuss the stages of development.
3. Analyse the importance of emotions in the development of children.
4. Discuss the main characteristics of mental development in adolescence.
5. Explain the main effects of emotions.

1.9 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education*. United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 2 THE STUDY OF DEVELOPMENT

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Structure

2.0 Introduction
2.1 Objectives
2.2 Importance of the Study of Development
  2.2.1 General Principles of Development
2.3 Methods of Studying Development
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2.0 INTRODUCTION

Development refers to the changes in the biological and physiological structure in a human being throughout the lifespan. It combines the patterns of the development from infancy, childhood, and adolescence to adulthood. It is a process of growth from an infant to an adult. The process of development begins from the womb of the mother.

Growth and development occur after birth, and include both physical and psychological development, influenced by genetic, hormonal, environmental and other factors. Development and growth continue throughout life, through childhood, adolescence, and through adulthood to senility, and are referred to as the process of ageing. It is a social and natural process which includes both qualitative and quantitative changes. It is affected by both heredity and environmental factors. It can be measured in both qualitative and quantitative terms of measurement.

In this unit, the importance of development, its main areas and the methods related to the process of development have been discussed. The factors which influence the genes in an offspring and the laws of hereditary have been explained. The unit will also discuss the role of hereditary and environment in the development process of a child.

2.1 OBJECTIVES

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

- Anlayse the main areas of development
- Discuss the importance and methods of study of development
- Interpret the factors which influence the expression of genes in offspring
- Identify the laws of hereditary
- Analyse the concept of supportive evidence of hereditary
- Explain the importance of hereditary and environment in the development process

2.2 IMPORTANCE OF THE STUDY OF DEVELOPMENT

There are five main areas of development in which children develop skills. These areas are discussed in the following section.

- **Cognitive Development:** Cognitive development is the child's ability to learn and solve problems.
- **Social and Emotional Development:** Social and emotional development is the child's ability to interact with others, which includes being able to help themselves and self-control.
- **Language Development:** Language development is the child's ability to both understand and use language.
- **Fine Motor Skill Development:** Fine motor skill development is the child's ability to use small muscles, specifically their hands and fingers, to pick up small objects, hold a spoon, turn pages in a book, or use a crayon to draw.
- **Gross Motor Skill Development:** Gross motor skill development is the child's ability to use large muscles.

The teaching learning environment is designed in keeping in mind the basic features of life learner centred education and provision of holistic development of the learners. It is the primary responsibility of the teacher to have a complete knowledge about the development of the learners. It facilitates the process of finding about various aspects of development such as cognitive development, social and emotional development, fine and gross motor skills, and speech and language development.

We will in the following section, discuss the importance of study of development. These are enlisted as follows:

1. **Attainment of knowledge of major aspects of development:** It facilitates gaining of knowledge of developmental milestones of

different age groups and in facilitation of designing of teaching learning environment for them for best learning outcome.

2. **Comprehension of the early learning process:** It creates an appropriate learning environment and helps in development of appropriate teaching learning material help young child love learning.
3. **Incorporate relationship-building skills:** It is a unique opportunity to learn about the important relationships between parents and educational professionals, as well as the relationships between educators and other community leaders.
4. **Provide a hands-on learning experience:** Teachers will be able to use other resources such as blocks, toys, sand, and water to help the learners for developing the concepts of shape, texture, colors, numbers, and elements.
5. **Preparation for acknowledgment of individual differences:** The knowledge of developmental aspects facilitates in acknowledgement of the fact that there is a wide pool of individual differences among learners which requires attention while planning for teaching learning experiences.
6. **Providing direction to general pattern of development**: It helps in identification of gaps in development process and takes remedial steps for the same.
7. **Progress towards harmonious development of the learners:** Principle of correlation among various aspects of development facilitates in harmonious growth and development of the learner.

2.2.1 General Principles of Development

The following are the general principles of development:

- Development is continuous
- Development is sequential
- Development is gradual
- Development varies from person to person
- Development is a product of hereditary
- Development is predictable
- Development precedes from general to specific

Check Your Progress

1. Define fine motor skill development.
2. What are the general principles of development?

2.3 METHODS OF STUDYING DEVELOPMENT

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We will in this section discuss the methods of studying development.

- **Longitudinal Studies:** Longitudinal studies focuses on the same group of children over a long period of time which can range from shorter period such as a few months or throughout their life time.
- **Cross Sectional Studies**: Cross sectional studies focus on behaviour and abilities across different groups of children.
- **Case Studies:** Case studies focus on the study of some children regularly over a period of time. This can be a short time period or longer. The child can be observed or they may be asked to record things in a diary or parents may record things about the child. This gives a lot of rich and detailed information about the child, which is harder when looking at a larger sample of children.

2.3.1 Genetic Factors in Development

At birth a person inherits 50 per cent of each parent's genetic material (genes) that are passed along. Heredity refers to traits and features that are inherited from one's parents and their previous generations through the chromosomes found in the DNA. These control physical traits such as height, skin, hair and eye colour, and susceptibility to some medical conditions, as well as a great many other individual mental, physical and psychological traits. According to psychologists, Douglas and Holland, 'One's heredity consists of all the structures, physical characteristics, functions or capacities derived from parents, other ancestry.'

Factors Influencing Expression of Genes in an Offspring

There are several factors responsible for the expression of genes is the interaction of the gene with other genes and the continual interaction between the genotype and the environment. These factors are discussed as follows:

- **Genetic Interactions:** Genes sometimes contain conflicting information and prominently the dominant gene is expressed. Some genes act in an additive way. For example, if a child has one tall parent and one short parent, the child may end up splitting the difference by being of average height. In other cases, some genes follow a dominant-recessive pattern. Eye colour is one example of dominant-recessive genes at work. The gene for brown eyes is dominant and the gene for blue eyes is recessive.
- **Gene-Environment Interactions:** The environment to which a child is exposed to both in womb of the mother and throughout the rest of their life can also impact how genes are expressed. For example, exposure to harmful drugs while in utero can have a dramatic impact on later child

development. Height is a good example of a genetic trait that can be influenced by environmental factors. While a child›s genetic code may provide instructions for tallness, the expression of this height might be suppressed if the child has poor nutrition or a chronic illness.

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Laws of Heredity

The following are the main laws of heredity:

- **Law of Similarity:** According to the law of similarity, offspring tends to be similar to their parents. For example, in highly intelligent parents are most possible to have bright children.
- **Law of Variation:** According to law of variation, children may vary or differ from their parents with respect to one another or the other traits or characteristics.
- **Law of Regression:** According to law of regression, there is an inherent tendency in human beings to move towards the mean transmission of traits and characteristics from one generation to another.

Genetic Factors affecting Human Development

The various genetic factors influencing human development are:

- **Parents and their forefathers**: The major inheritance happens from the parents in the offspring.
- **Genes**: The physical and other aspects are transmitted from one generation to another generation through genes.
- **Ductless glands**: Ductless glands secrete hormones directly into blood, such as pituitary gland.

Check Your Progress

3. State the premise of law of variation.
4. What so you understand by the term, 'Heredity'?

2.4 SUPPORTIVE EVIDENCES OF HEREDITY

The supportive evidence of heredity includes:

(a) Heritability of Intelligence

- Family studies show that intelligence tends to run in families.
- Twin studies show a higher correlation between identical twins in IQ than between fraternal twins. This holds true even when identical twins reared apart are compared to fraternal twins reared together.
- Adoption studies show that adopted children somewhat resembles their biological parents in intelligence.

(b) Language Development

(c) Predisposition to Neurological disorders or any disease

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2.4.1 Biological Basis of Behaviour: Heredity vs. Environment

Nature refers to heredity, the influence of inherited characteristics on personality, physical growth, intellectual growth and social interaction. Nurturing refers to an organism's environmental experiences that include parenting styles and physical surroundings social conditions. The interaction of nature and nurture influences every aspect of mind and behaviour to a degree. Neither of the two factors operates alone (Sylvia S Mader, 2003). Heredity and environment operate together to produce temperament, height, weight, ability to pitch a baseball, reading ability and so on.

According to a professor of psychology, William Greenough (2001) the interaction of heredity and environment is so extensive that to ask, which is more important—nature or nurture—is like asking which is more important to a rectangle, height or width. People who are more successful at constructing optimal life experiences then others are the ones who looked for and found meaningful life theme as they developed. Their lives were not restricted to simple biological survival and passive acceptance of environmental dictates. Psychologists agreed that much complex behaviours have some genetic loading that makes people likely to develop in a particular way. However, our actual development also depends on what one experiences in our environment (J Gottlieb, 2004). The influence of the environment ranges from the things that are lumped together under nurture (like peer relations, family dynamics, neighbourhood quality, parenting and schooling) to biological encounters (like cellular activities, complications in birth, and viruses).

Some psychologists, however, believe that one can develop beyond what our genetic inheritance and our environment give us. They argue that a key aspect of development involves seeking optimal experiences in life (M Massimini and A DelleFave, 2000). They cite examples of people who go beyond simple biological adaptation to actively choose from the environment the things that serve their purposes. These individuals build and construct their own lives, authoring a unique developmental path.

The social and the physical surrounding in which a person lives, conducts himself or herself, grows, is called the environment. Environment also includes the context of school, family and community within which a person lives and interacts with the genetic characterization. By studying the identical and fraternal twins, the influence of environment heredity can be sorted out. Identical twins have more similarity in intelligence than fraternal twins, even when they are separated at birth and reared in different homes. They are also similar when it comes to susceptibility to schizophrenia and some personality characteristic. Recent studies show that intelligence as

well as the amount of grey matter is more correlated in identical twins than in fraternal twins (Thompson et al, 2001). Intelligent people have more grey matter and the amount of grey matter appears to be strongly related to genetic factors.

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Behaviour Genetics

Behaviour genetics is the study of the degree and nature of heredity's influence on behaviour. Twin studies and behaviour genetics examine the extent to which individuals are shaped by their heredity and their environmental experiences (D Wahlsten, 2000). The behavioural similarities of identical twin are compared with fraternal.

Experiment with Twin Study

In a twin study, 7000 paired identical and fraternal twins were compared on the personality test of extraversion and neuroticism (Rose and others, 1988). The identical twins had more similarity than the fraternal twins on both the personality traits, suggesting that gene influences both traits.

In another type of twin study, researchers evaluate identical twins that have been reared in separate environments. If their behaviour is similar, the assumption is that heredity has played an important role in shaping their behaviour. This strategy is based on the Minnesota Study of Twins Reared Apart, directed by Thomas Bouchard and his colleagues (1996). They bring identical twins that have been reared apart to Minneapolis from all over the world to study their behaviour. They ask many questions about their vocational orientation, childhood environment and family, values and personal interests. Also, their medical history along with information about their exercise habits, diet and smoking are obtained.

Critics argue that some of the separated twins in the Minnesota study had been together several months prior to their adoption, that some had been reunited prior to their testing (in some cases, for a number of years), that adoption agencies often put identical twins in similar homes, and that even strangers who spend several hours together are likely to come up with some coincidental similarities (L E Adler, 1991).

Behaviour genetics also use adoption studies to try to determine whether the behaviour of adopted children is more like that of their biological parents or their adopted parents. Another type of adoption study compares biological and adopted siblings. In one study, the educational levels attend by biological parents were better predictors of the adopted children's IQ scores than were the IQs of the children's adoptive parents (Scarr and Weinberg, 1983). Because of the stronger genetic link between the adopted children and their biological parents, the implication is that heredity plays an important role in intelligence. However, numerous studies document the critical role of environment in intelligence as well (R J Sternberg and E L Grigorenko, 2001).

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Behaviour genetics is the science of heredity which studies the origins of behaviour that determine how much of the behaviour is the result of genetic inheritance and how much due to person's experience. DNA (deoxyribonucleic acid) is a very special kind of molecule (the smallest particle of a substance) that still has all the properties of the substances. DNA consists of two strands, each composed of certain sugars and phosphates. Due to the unique shapes of DNA each molecule of DNA is linked end to end with the others, forming a very long strand, sections of this DNA strand are linked by the amines, which are usually referred to by letters A, T, G and C. Amines are organic structures that contain the genetic codes for building the proteins that make up organic life chain colouring, muscles and skin. It controls the life of each cell. Each section of DNA containing a certain sequence of these amines is called a gene. Genes are located on rod-shaped structures called chromosomes, which are found in the nucleolus of a cell. Humans have a total of forty-six chromosomes in each cell of their bodies (with the exception of the egg and the sperm). Twenty-three of these chromosomes come from the mother's egg and the other 23 from the father's sperm. Most characteristics are determined by twenty-two such pairs, called the autosomes. The last pair determines the sex of the person. These two chromosomes are called the sex chromosomes. There is a gene for hair colour on each chromosome. The actual colour of the person's hair will be determined by those two genes, one gene from each parent. Some genes that are more active in influencing the trait are called dominant. A dominant gene will always be expressed in the actual trait. A person with a dominant brown hair colour gene will have brown hair, no matter what the other gene is.

Some genes are less active in influencing the trait and will only be expressed in the actual trait if they are paired with another less active gene. These genes tend to recede, or fade into the background when paired with a more dominant gene. These are called recessive. Several genetic disorders are carried by recessive genes. Diseases carried by recessive genes are inherited when a child inherits two recessive genes, one from each parent. Disorders inherited in this manner are cystic fibrosis (a disease of the respiratory and digestive tracts, sickle cell anaemia (a blood disorder). Each cell and each sperm are supposed to have twenty-three chromosomes. In the creation of these cells a chromosome can end up in the wrong cell, leaving one cell with only twenty-two and the other with twenty-four. If either of these cells survives to mate, the missing or extra chromosome can cause mild to severe problems in development (American Academy of Paediatrics, 1995; Barnes and Carey, 2002; Gardner and Sutherland, 1996). Down syndrome is a disorder in which there is an extra chromosome in what would normally be the twenty-first pair. Symptoms include almond-shaped, wide-set eyes and mental retardation (Baren and Carey, 2002; Hernandez and Fisher, 1996). Klinefelter's syndrome is a disorder in which the twenty-three set of sex chromosomes is XXY with the extra X producing a male with reduced

masculine characteristics enlarge breast, obesity and excessive height (Bock, 1993) and Turner's Syndrome is a disorder in females in which the twenty-third pair is actually missing on X, so that the result is a lone X chromosome (Rauke and W Saenger, 2001). These females tend to be very short infertile and sexually under developed (American Academy of Paediatrics, 1995; Rover 1993).

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Evolutionary Perspective

Natural selection, the process described by Charles Darwin to account for evolutionary change, plays an important role in shaping both behaviour and brain. Evolutionary psychology is focussed on the study of how evolution explains physiological processes. Psychologists and researchers take the basic principles of evolution, including natural selection, and apply them to psychological phenomena. This perspective suggests that these mental processes exist because they serve an evolutionary purpose—they aid in survival and reproduction.

Biological and Cultural Root

In the evolutionary scheme, some individuals are more successful at solving problems and adapting effectively than others (Crawford and Salmon, 2004; Goldsmith and Zimmerman, 2001). Those who are successful pass on their genes to the next generation; those who are less successful do not.

In this evolutionary psychology view, psychological functions have become more specialized over human history (David Buss, 2000, 2004; L Cosmides and others, 2003). The specialized psychological functions that evolutionary psychologists study are as follows:

- Development of a fear of strangers between 3 and 24 months of age, as well as very common fears of snakes, spiders, heights, open spaces and darkness (Marks, 1987).
- Perceptual adaptations for tracking motion (Ashida, Seiffert, and Osaka, 2001).
- Children imitate high-status models and not low-status models (A Bandura, 1977).

Throughout the world, kind, intelligent, and dependable mates are preferred (David Buss and others, 1990). Evolutionary psychologists believe that these specialized functions developed because they helped humans adapt and solve problems in past environments (S J C Gaulin and D H McBurney, 2004). Some critics caution that evolutionary psychology places too much emphasis on the biological foundations of behaviour. For example, Albert Bandura (1998), whose social cognitive theory acknowledges the importance of human adaptation and change, rejects what he calls 'one-sided evolutionism', in which social behaviour is considered to be solely the product of evolved biology. Psychologist, Bandura recommends a bidirectional view:

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Evolutionary pressures created changes in biological structures facilitating the use of tools, which enabled organisms to manipulate, alter and construct new environmental conditions. Environmental innovations of increasing complexity, in turn, produced new pressures for the evolution of specialized biological systems facilitating consciousness, thought, and language.

Scientists such as Steven Jay Gould (1981) agree that human evolution gave us body structure and biological potentialities, not behavioural dictates. The advanced biological capacities that evolved can be instrumental in producing diverse cultures; for example, aggressive or peaceful. Russian-American scientist Theodore Dobzhansky (1977) reminds us that the human species has evolved the capacity for learnability and plasticity, which allows us to adapt to diverse contexts. Most psychologists would agree that the interaction of biology and environment is the basis for own development as human beings (C G Coll, E L Bearer and R M Lerner, 2004).

Socio-Cultural Shaping of Behaviour

The behaviour of human beings is meaningful in its cultural context. In terms of shared practices and meaning, different cultures guide us in choosing our goals. Different patterns of behaviour are found in different cultures which emerge in the context of interaction of the people which are encoded in different forms. Various customs, traditions and cultural artefacts display these codes. It has both material and subjective aspects. Culture flows from one generation to another. The subjective part includes roles, norms and values; whereas the material part includes different artefacts, sculptures and tools. Culture works in different ways, on one side it provides us with opportunities and on the other side it constrains us. Different skills and behaviour patterns are discouraged and encouraged depending on the particular cultural context. Different demands are put by an extended family and a nuclear family. In the same way, schools in remote villages and cities differ in their functioning; for example, interaction pattern and classroom organization. Every culture tries to maintain its identity.

Check Your Progress

5. What are amines?
6. What are recessive genes?

2.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Fine motor skill development is the child's ability to use small muscles, specifically their hands and fingers, to pick up small objects, hold a spoon, turn pages in a book, or use a crayon to draw.

2. The general principles of development are as follows:
   (a) Development is continuous
   (b) Development is sequential
   (c) Development is gradual
   (d) Development varies from person to person
   (e) Development is a product of hereditary
   (f) Development is predictable
   (g) Development precedes from general to specific
3. Law of variation states that children may vary or differ from their parents with respect to one another or the other traits or characteristics.
4. Heredity refers to traits and features that are inherited from one's parents and their previous generations.
5. Amines are organic structures that contain the genetic codes for building the proteins that make up organic life chain colouring, muscles and skin.
6. Some genes are less active in influencing the trait and will only be expressed in the actual trait if they are paired with another less active gene. These genes tend to recede, or fade into the background when paired with a more dominant gene. These are called recessive genes.

2.6 SUMMARY

- Social and emotional development is the child's ability to interact with others, which includes being able to help themselves and self-control.
- Fine motor skill development is the child's ability to use small muscles, specifically their hands and fingers, to pick up small objects, hold a spoon, turn pages in a book, or use a crayon to draw.
- The teaching learning environment is designed in keeping in mind the basic features of life learner centred education and provision of holistic development of the learners.
- It is the primary responsibility of the teacher to have a complete knowledge about the development of the learners.
- The knowledge of developmental aspects facilitates in acknowledgement of the fact that there is a wide pool of individual differences among learners which requires attention while planning for teaching learning experiences.
- Principle of correlation among various aspects of development facilitates in harmonious growth and development of the learner.

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- Longitudinal studies focuses on the same group of children over a long period of time which can range from shorter period such as a few months or throughout their life time.
- Cross sectional studies focus on behaviour and abilities across different groups of children.
- Heredity refers to traits and features that are inherited from one's parents and their previous generations through the chromosomes found in the DNA.
- Genes sometimes contain conflicting information and prominently the dominant gene is expressed.
- According to law of regression, there is an inherent tendency in human beings to move towards the mean transmission of traits and characteristics from one generation to another.
- Nature refers to heredity, the influence of inherited characteristics on personality, physical growth, intellectual growth and social interaction.
- Nurturing refers to an organism's environmental experiences that include parenting styles and physical surroundings social conditions.
- Behaviour genetics is the science of heredity which studies the origins of behaviour that determine how much of the behaviour is the result of genetic inheritance and how much due to person's experience.
- DNA (deoxyribonucleic acid) is a very special kind of molecule (the smallest particle of a substance) that still has all the properties of the substances.
- Evolutionary psychology is focussed on the study of how evolution explains physiological processes.
- Culture works in different ways, on one side it provides us with opportunities and on the other side it constrains us. Different skills and behaviour patterns are discouraged and encouraged depending on the particular cultural context.

2.7 KEY WORDS

- **Cognitive Development**: It refers to the child's ability to learn and solve problems.
- **Cross sectional studies**: It refers to a study which focuses on behaviour and abilities across different groups of children.
- **Heredity**: It refers to traits and features that are inherited from one's parents and their previous generations.
- **Language development**: It refers to the child's ability to both understand and use language.

- **Nurturing**: It refers to an organism's environmental experiences that include parenting styles and physical surroundings social conditions.

2.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

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Short Answer Questions

1. How is the teaching learning environment designed?
2. What are the factors which influence genes in an offspring?
3. How does a gene act in an additive way?
4. What are the genetic factors which influence human development?
5. Write a short note on behaviour genetics.

Long Answer Questions

1. What are the five main areas of development? Discuss in detail.
2. Explain the importance of study of development.
3. Discuss the main laws of hereditary.
4. How does culture influence the development in children? Discuss in detail.
5. Explain the supportive evidence of hereditary.

2.9 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education*. United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

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UNIT 3 ENVIRONMENT AND DEVELOPMENT

Structure

3.0 Introduction
3.1 Objectives
3.2 Importance of Environmental Factors in Affecting Child Development
3.3 Social Environment and Development
  3.3.1 Mental Environment and Development
  3.3.2 Supportive Evidences of Environment
3.4 Answers to Check Your Progress Questions
3.5 Summary
3.6 Key Words
3.7 Self Assessment Questions and Exercises
3.8 Further Readings

3.0 INTRODUCTION

Environment is a system which provides natural surroundings for the existence of organisms (including humans) and which is a prerequisite for their further evolution. Environment shapes the character of a person in which a child is brought up. A child learns from his or her surrounding and forms their opinion based on the environment in which he or she grows.

Environmental psychology focuses on the relationship between individuals and their surroundings. It examines the way in which the natural environment and our built environments shape us as individuals.

In this unit, the importance of environmental factors and now they affect the child development has been highlighted. The factors which affect physical environment, social environment and mental health have also been discussed in this unit.

3.1 OBJECTIVES

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

- Discuss the importance of environmental factors which affect child development
- Explain the factors which affect physical environment
- Analyse the meaning of social environment and its importance in the development process
- Interpret the ways in which mental health affects the development process

3.2 IMPORTANCE OF ENVIRONMENTAL FACTORS IN AFFECTING CHILD DEVELOPMENT

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We will in this section discuss the ways in which environmental factors affect child development.

1. **Family Relationships**: The primary and significant impact on the growth and development of the child is his or her family. The family nurtures and protects the children both physically and emotionally. Different parenting styles such as disciplinarian, easygoing or mixed influence are all aspects of development of the child. The families where elders of the family spend the time with their children contribute in a positive manner in their development. On the contrary, children who are abused or neglected by their families suffer in terms of their mental and emotional well being.It is important to ensure the maintenance of healthy relationship with the children. It is equally important that the entire family should be amicable among themselves.
2. **Physical Environment**: The effect of the physical surroundings of the child is of paramount interest. The personality of the child can be affected by a congested environment. The child seeks alternative forms of attention if there are many family members creating a possibility of rift between the parents and the children. The child's school must be selected on the basis of the needs of the child. It is important for the parents to be updated with school activities, meet their teachers regularly, and interact with their peers and their parents. They can be enrolled in co-curricular activities outside school such as sports, music, arts programmes, meditation, music classes, and so on, depending upon the feasibility and interest of the child.
3. **Financial Situation**: The financial condition of the family determines the kind of society one decides to live in. The financial conditions have a greater impact on childhood development. Wealth also helps to secure better academic training, opportunities for travel, tuition classes, and many other factors. It is essential for parents to be intricately involved in the lives of their children. It is important for parents to make them understand the financial management and to make them care for basic things. Children can thrive in a poor family as long as they are loved and wanted. The children are more influenced by the quality of time spent with them. Children with a poor financial status may face the problem of poor nutrition, which limits their ability to succeed.
4. **Health and Nutrition**: Families belonging to the lower strata of the society also have less access to nutrition, which can limit the potential of their children. Adequate nutrition is important for the physical and mental growth of a child and is related to important functional

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outcomes at later ages. A balanced diet is also required by pregnant women, as under nutrition can lead to problems such as low birth weight, miscarriages stillbirths, slowed development, and so on. In children, habits like unhealthy or excessive eating can lead to weight gain, obesity, diabetes, stunted growth, lethargy, and a host of other complications. It is important for a mother to feed her child as it is an ideal food consisting of carbohydrates, fats, proteins, minerals, vitamins, antibodies and everything a growing newborn needs. After the first six months, one can complement their child's diet with solid foods. It is important to ensure that they get full balanced diet which must comprise of micronutrients such as vitamins, iodine, iron, the lack of which can cause serious problems like vision defects, anaemia and various other diseases. These problems have been linked with reduced motor skills and social development of toddlers and young children.

5. **Learning**: In addition to learning at school, home environment also plays a significant role in the mental development of the child. It includes cognitive, linguistic, emotional and motor skills. The best environment for the development is a calm and loving home facilitating the children to focus on improving their abilities. The absence of such a stimulating environment can have a negative impact on the child's language and speech developments including the absence of stimulation, anxiety, constant shifts in their environment and various other aspects. The parents must provide opportunities for their child to explore their interests, especially at home. Encouraging them to question everything and teaching them to find solutions by themselves instils a sense of curiosity and sense of confidence. The parents should expose their children to the right kinds of environments as they will have a direct impact on their behaviour, learning, and personality. The major things to remember are keeping the home environment peaceful and loving, bonding with the children, and providing them with the necessities required to grow and thrive.

3.2.1 Physical Environment and Development

Physical environment plays an important role in the development process. The following factors affect the physical environment.

- **Genetics:** Sometimes, children inherit certain genes and physical traits from their parents that can hinder overall development. Down syndrome, for example, is one genetic condition that causes delays in physical and intellectual development. Turner syndrome is another inherited chromosomal disorder that affects the physical, emotional and cognitive development in female children, often resulting in physical abnormalities and learning disabilities.

- **Nutrition:** Nutrition is essential to healthy child development. Healthy children who continually receive proper nutrition will thrive developmentally, while malnourished children may suffer problems in physical, cognitive and behavioural development. It is significant to promote healthy eating habits among children. Routinely eating unhealthy foods such as junk food and fast food contributes to obesity and diabetes, which can impede normal physical, emotional and social development in a variety of different ways.
- **Involvement in Physical Activities:** Exercise promotes healthy physical development which impacts growth in other areas as well. According to studies undertaken, a direct link between physical activity and improved cognitive ability has been found out.
- **Environment:** Environmental factors directly impact a child's development in many ways. Unsanitary living conditions can harm children's health and hinder developmental growth, while isolation from peers can inhibit social development. Children who grow up in environments that provide little or no mental or sensory stimulation might lag in cognitive development.

Check Your Progress

1. How does environment affect a child's development?
2. What is Turner syndrome?

3.3 SOCIAL ENVIRONMENT AND DEVELOPMENT

The social environment refers to an individual's physical surroundings, community resources and social relationships. The following factors affect the social environment:

- **Physical Environment**: The physical surrounding of a social environment includes home environment, opportunities for education, health maintenance facilities, job opportunities and open space for playful activities. The nature and quality of physical surroundings can influence the quality of parenting and in turn affects the health and well-being of children within that environment.
- **Community Resources**: The community resources include all the community structures and organizations and support within the community. The extent to which resources are available in the community influences the health of individuals living within it. Living in a socio-economically deprived, underdeveloped community, has a negative impact on child development.

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- **Social Relationships**: The interactions and relationships between various individuals or groups are termed as 'social relationships'. In every society, individuals develop relationships with other individuals to enable them to achieve their goals. These relationships may be entered into consciously or unconsciously. The obligations, expectations, trust and norms of any relationship influence the extent to which these relationships enable an individual to develop 'social capital'. Social network is a strong, supportive network of individuals who provides access to emotional and physical resources which an individual needs to fulfil their goals. The school has a huge impact on the child's social environment. In reverse, the social environment largely determines who children form social relationships with and the qualities of those social relationships, as many of the relationships children form are within their family or neighbourhood. As such, parents' decisions (or, on the contrary, lack of decision making power) about where to live, work and school can markedly affect the health and wellbeing of their children.

  The availability of employment opportunities within a neighbourhood or community may also affect a child's development, by influencing their parents' work. If the parents are working in near localities, it will give them more time to spend with their children.Work-related stress and time constraints have been shown to have negative effects on individuals and spill over into the family and affect relationships within it, including the quality of parent-child relationships.

- **Community Resources**: Parents teachers and other stakeholders (for example, community members, family, and friends) together play a significant role in the education of the child. The degree of cohesion amongst members of the community (measured, for example, by the presence or absence of community organizations or community activism) influences the nature of these relationships. Communities characterised by high levels of cohesion, such as those with active community groups, provide good opportunities for individuals to become involved in and develop the resources in their community. The rules and norms which govern a community can also exert an influence. Factors relating to an individual's personal circumstances also influence the extent to which they are able to access resources within the community. For example, the length of time an individual has lived in a community influences the extent to which they engage with resources in the community, and residential stability increases an individual's sense of belonging to a community and access to resources. A parent's work situation may also influence their access to community resources. For example, parents who are working fulltime or working

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long distances away from their home community may find it difficult to get involved in community organisations.

- **Social Relationships**: The social environment also influences the nature and quality of the social relationships in which parents and children engage. Developing and maintaining positive social relationships like building trust, mutual respect, love and happiness is fundamental for a good quality of life and psychological health. Individuals who have good relationships develop a sense of belonging and receive support from other members of their social network which helps them to function normally from day to day and also to cope with stress and difficult times. Social relationships also provide opportunities for generating new ideas, discussing issues and concerns, sharing good news and obtaining social, economic and emotional support. However, some social relationships involve negative emotions and behaviours (for example, lack of trust, envy, jealousy, breaking promises and violence) which may undermine an individual's wellbeing and life quality.

  Development of positive social relationships is reinforced by engaging in a good social environment. There is an increasing recognition that social behaviours are learned and that children must be taught pro-social behaviour. Children learn from their social environment and their daily observations of their environment are likely to determine their social behaviour. Social skills can also be actively taught, for example when a parent or teacher reinforces and encourages good behaviours, the probability of these behaviours occurring is enhanced. Teachers and parents may also actively encourage children to apply social skills learnt in one social setting (for example, the classroom) to other settings (for example, home or the playground).

  Both the parent's and children's social relationships are increasingly recognized as important factors in contributing to the child's holistic development. The parents who have strong and supportive social relationships are more likely to develop positive social relationships themselves and will possess positive and supportive social relationships and networks which improve a child's development. In terms of parenting, social relationships of key importance include those between a child and their parents, but also a child and other adults (for example, teachers, and other children's parents) and other children (including their siblings). Parental involvement with the parents of other children creates trust and obligations, as well as community norms, which the parents set collectively for their children. Relationships between parents and children also affect a child's ability to develop social relationships in the community. One study reported that the children of parents who had difficulty disciplining their children and being affectionate towards

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them due to financial stress, received lower teacher ratings in terms of their social behaviour compared to children whose parents did not experience these difficulties.

- **Cognitive Development and Educational Attainment**: A child's social environment influences their cognitive development and educational attainment. Children who engage in good social relationships perform better academically as compared to those who do not engage in social interactions. Children living in social environments characterised by residential stability are less likely to be absent from school and perform better academically than those who do not. Those who live in poor quality neighbourhoods (for example, low socio-economic status) are more likely to drop out of school before completion than those who do not.

  Attending early childhood education, at which a child can develop social relationships with other children and teachers and in doing so, develop pro-social behaviour, has a particularly profound effect on future academic achievement. Children who attend pre-school perform better academically and are less likely to repeat a grade. Cognitive development is influenced by the social environment during early childhood even if a child subsequently moves to a different neighbourhood. An intergenerational effect is also present, and children whose parents grew up in disadvantaged neighbourhoods also experience impaired cognitive development and educational attainment compared to those who did not, even if they grow up in a more affluent neighbourhood.

- **Risk-taking Behaviour**: Growing up in a positive social environment is associated with less risk taking behaviour. Children who grow up in positive environments are less likely to have accidents requiring treatment than those who do not. There is also a reduced risk of developing a substance use disorder amongst children who have positive social relationships compared to those who do not.

- **Emotional and Psychological Well-being**: The sense of belonging which individuals experiences when they have good social relationships has a positive influence on their mental health. Children who have good social relationships have greater self esteem than those who do not and are less likely to experience mental health problems including depression and anxiety. There is also evidence that pro-social behaviour during childhood leads to better psychological health in adulthood.

- **Motivation**: Individuals living in social environments characterised by positive social relationships are more motivated than those who do not. For example, peer support has been found to be an important predictor of a child's motivation to pursue social goals, while teacher

support increases a child's motivation for both social and academic goal pursuits. Parent support also influences children in terms of their level of interest in school and their pursuit of goals.

- **Physical Health**: A positive social environment also promotes improved physical health, including proper reading habits and increased participation in sports events.

3.3.1 Mental Environment and Development

The term, 'mental environment' refers to the sum of all societal influences upon mental health. It is used in critical terms in industrial based societies which produce pollutants that can harm the human physical health which can impact psychological damage.

This poor mental environment may help explain why rates of mental illness are reportedly higher in industrial societies which might also have its roots in poor educational environment and mechanical routinised life present. Magico-religious beliefs are an important contribution of such communal settings. Delusions such as these rooted from childhood are often hard to completely regulate from a person's life.

The idea has its roots in evolutionary psychology, as the deleterious consequences of a poor mental environment can be explained by the mismatch between the mental environment humans evolved to exist within and the one they exist within today. Mental health describes the level of psychological well being or an absence of a mental disorder. These mental disorders can range from problems such as depression to schizophrenia. The social and environmental causes such as locality or neighbourhood, proximity with friends

3.3.2 Supportive Evidences of Environment

- Families with poor economic conditions influenced the conduct problems in children.
- Incorporating the children's perspectives, that is, encouraging them to feel that they are part of the solution to the family's difficulties.
- The exposure of foetus to external influences like alcohol drugs etc can impact the development
- Infants are active receptors of care.
- Children react to both positive and negative environments.

Check Your Progress

3. What are social relationships?
4. State any one factor which influences cognitive development?

3.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

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1. Environmental factors directly impact a child's development in many ways. Unsanitary living conditions can harm children's health and hinder developmental growth, while isolation from peers can inhibit social development.
2. Turner syndrome is inherited chromosomal disorder that affects the physical, emotional and cognitive development in female children, often resulting in physical abnormalities and learning disabilities.
3. The interactions and relationships between various individuals or groups are termed as 'social relationships'.
4. Cognitive development is influenced by the social environment during early childhood even if a child subsequently moves to a different neighbourhood. An intergenerational effect is also present, and children whose parents grew up in disadvantaged neighbourhoods also experience impaired cognitive development and educational attainment compared to those who did not, even if they grow up in a more affluent neighbourhood.

3.5 SUMMARY

- The primary and significant impact on the growth and development of the child is his or her family.
- The effect of the physical surroundings of the child is of paramount interest. The personality of the child can be affected by a congested environment.
- The child's school must be selected on the basis of the needs of the child. It is important for the parents to be updated with school activities, meet their teachers regularly, and interact with their peers and their parents.
- The financial condition of the family determines the kind of society one decides to live in. The financial conditions have a greater impact on childhood development.
- Families belonging to the lower strata of the society also have less access to nutrition, which can limit the potential of their children.
- In addition to learning at school, home environment also plays a significant role in the mental development of the child. It includes cognitive, linguistic, emotional and motor skills.

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- The parents must provide opportunities for their child to explore their interests, especially at home. Encouraging them to question everything and teaching them to find solutions by themselves instils a sense of curiosity and sense of confidence.
- Nutrition is essential to healthy child development. Healthy children who continually receive proper nutrition will thrive developmentally, while malnourished children may suffer problems in physical, cognitive and behavioural development.
- Exercise promotes healthy physical development which impacts growth in other areas as well. According to studies undertaken, a direct link between physical activity and improved cognitive ability has been found out.
- The social environment refers to an individual's physical surroundings, community resources and social relationships.
- The physical surrounding of a social environment includes home environment, opportunities for education, health maintenance facilities, job opportunities and open space for playful activities.
- The community resources include all the community structures and organizations and support within the community.
- Living in a socio-economically deprived, underdeveloped community, has a negative impact on child development.
- The interactions and relationships between various individuals or groups are termed as 'social relationships'.
- In every society, individuals develop relationships with other individuals to enable them to achieve their goals.
- The obligations, expectations, trust and norms of any relationship influence the extent to which these relationships enable an individual to develop 'social capital'.
- Social network is a strong, supportive network of individuals who provides access to emotional and physical resources which an individual needs to fulfil their goals.
- The availability of employment opportunities within a neighbourhood or community may also affect a child's development, by influencing their parents' work.
- Communities characterised by high levels of cohesion, such as those with active community groups, provide good opportunities for individuals to become involved in and develop the resources in their community.
- The social environment also influences the nature and quality of the social relationships in which parents and children engage.

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- Development of positive social relationships is reinforced by engaging in a good social environment.
- A child's social environment influences their cognitive development and educational attainment.
- Growing up in a positive social environment is associated with less risk taking behaviour.
- The sense of belonging which individuals experiences when they have good social relationships has a positive influence on their mental health.
- Individuals living in social environments characterised by positive social relationships are more motivated than those who do not.
- The term, 'mental environment' refers to the sum of all societal influences upon mental health.

3.6 KEY WORDS

- **Community resources**: It refers to resources which includes all the community structures and organizations and support within the community.
- **Cognitive development**: It refers to a field of study which focuses on a child's development in terms of information processing, conceptual resources, perceptual skill, language learning, and other aspects of the developed adult brain and cognitive psychology.
- **Mental environment**: It refers to the sum of all societal influences upon mental health.
- **Social environment**: It refers to an individual's physical surroundings**,** community resources and social relationships**.**

3.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. Write a short note on the relationship between mental environment and development.
2. How does physical surrounding affect child's development?
3. Why is nutrition important for the development process?
4. What are community resources?
5. How is social capital formed between human beings?

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Long Answer Questions

1. Discuss the importance of the environmental factors in development.
2. 'The financial conditions have a greater impact on childhood development.' Analyse the statement.
3. Why is the role of home environment necessary for a child? Discuss in detail.
4. Analyse the physical factors which affect the development process in a child.
5. Discuss the factors which affect the social environment.

3.8 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

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UNIT 4 DEVELOPMENT DURING INFANCY

Structure

4.0 Introduction
4.1 Objectives
4.2 Physical Development during Infancy and Babyhood
  4.2.1 Aspects of Physical Development in Infancy and Babyhood
  4.2.2 Physical Growth during Babyhood/Infancy
  4.2.3 Physical Growth during Early Childhood
  4.2.4 Factors Affecting the Physical Development of the Child
4.3 Answers to Check Your Progress Questions
4.4 Summary
4.5 Key Words
4.6 Self Assessment Questions and Exercises
4.7 Further Readings

4.0 INTRODUCTION

Motor development is defined as a development which helps infants to use their bodies to perform different tasks. During infancy, the movement of the babies are uncontrolled. During the course of time, they learn to perform gross and fine motor skills.

The babies develop motor skills from the center of the body outward and from head to tail. They first learn to control their head and neck and then arms and then manipulate their fingers. They also first learn to move their torso and then learn to move their arms and legs.

In this unit, the principles of development changes, the aspects of physical development in babyhood and childhood have been discussed. The various physical changes which take place in infancy and childhood have been explained in detail. The unit will also highlight the factors which affect physical development in children.

4.1 OBJECTIVES

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

- Analyse the principles of development changes
- Discuss the aspects of physical development in babyhood and childhood
- Explain the physical growth during infancy
- Interpret the physical growth during childhood
- Discuss the factors which affect physical development in a child

4.2 PHYSICAL DEVELOPMENT DURING INFANCY AND BABYHOOD

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Children go through many body transformations in the course of development over the years. The very visible changes in body size are accompanied by less visible ones in body proportions, skeletal structure, bones, muscles and internal organs of the body. The general growth pattern in children involves rapid growth during infancy, slower gains in early and middle childhood, and rapid growth spurt again during adolescence with puberty. The changes in size, proportions and muscles support the development a number of large or gross motor skills and fine motor skills amongst children. As the child grows, it is natural for the child to develop gross motor skills before the fine motor skills.

Growth indicates the quantitative changes in the body structure such as height and weight, and development includes the changes in both the qualitative and quantitative way. Development is the continuous series of orderly cohesive transformations. The various types of developmental changes follow certain principles. Some of these principles are as follows:

- Growth and development follow an orderly sequence.
- Each child normally passes through a number of stages, each with its own essential characteristics.
- There are individual differences in rate and pattern of development.
- Though the human being develops as a unified whole, yet each part of the body develops at a different rate.
- Development is essentially the result of the interaction between maturation and learning. While maturation is the 'unfolding of characteristics potentially present in the individual's genetic endowment', learning refers to the relatively enduring 'changes that come about as a result of experience and practice.'

4.2.1 Aspects of Physical Development in Infancy and Babyhood

Let us discuss the different aspects of physical development in infancy and babyhood.

Changes in Body Sizes

The most significant signs of physical development are changes in the overall size of the child's body which can be observed through the visible changes in height and weight. The body size which includes the aspects of height and weight in a child gets influenced by both genetic and environmental factors. Genetic factor refers to what children inherit from their parents which is composed of hereditary traits that are passed on to the child. Environmental

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factors like nutrition, socio-economic status, family surroundings, cultural settings, also play an important role in child's physical growth and development. There can be individual differences in physical development; but by and large there is a pattern in the way children acquire height and weight. Based on research studies, there are suggestive ranges of height and weight for a particular age. The growth in the height and weight are important for determining the normal living of a child. These are, however, not the only development changes taking place. There are other, less apparent aspects of development which we will study in the subsequent sections.

Changes in Body Proportions

As children grow from infancy to childhood, changes in the form of bodies can be noted from the differences in the proportion of body organs.

Changes in Skeletal Structure, Bones and Muscles

Changes in skeletal structure and bones contribute to the overall physical development during childhood. The skeletal structure of an infant is soft which is composed mainly of cartilages. It is not as hard and rigid as bone but is stiffer and less flexible than muscle. As the child grows, the bines become stronger and the length is elongated. This process of hardening of the bones is known as ossification. It begins early in the first year and ends during puberty.

Muscles play an important role in the functioning of body organs like the heart and the digestive system. They are also responsible for strength and co-ordination of activities. By adolescence, the small muscles too gain maturity. A nutritious diet and a regular routine with physical activities and proper rest would enhance the healthy development of muscles and fatty tissues in children.

There are many wide individual differences in skeletal structure, bones and muscles development. The skeletal development of two children of the same age may show variations.

Changes in Teeth Structure

At the elementary school stage, there are many significant changes in the structure of teeth in children. The appearance of teeth happens in the same sequence in all children but there may be variation in age. Dental care is important to maintain healthy teeth throughout life. A balanced diet, supplemented with additional vitamins and fluoride along with proper dental care by brushing consistently, avoiding sugary foods, drinking fluoridated water is essential to the development of healthy teeth in children.

4.2.2 Physical Growth during Babyhood/Infancy

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The physical growth during babyhood comprises of:

- **Reflex Actions**: Infants need to learn how to move and to use their bodies to perform various tasks, a process better known as motor development. Initially, babies' movements are simply the uncontrolled, reflexive movements they are born with. Over time, they learn to move their body parts voluntarily to perform both gross (large) and fine (small) motor skills. In general, babies begin developing motor skills from the center of the body outward and from head to tail. They learn to control their head and neck before they learn to manoeuvre their arms; they learn to manoeuvre their arms before they learn to manipulate their fingers. Babies learn to move their torso before they learn how to move their arms and legs.

  The sucking reflex allows babies to drink milk and nourish themselves in the first days of life. This is a permanent ability, but as babies grow, they can control when they drink. Another permanent and life-supporting reflex is head turning. This reflex allows a baby to turn his head if something (a blanket, pillow, or stuffed animal) is blocking his airflow. Another reflex that also helps babies survive is the rooting reflex. When babies root, they may nuzzle their face and mouth into the caregiver's chest or shoulder. This may help them find a food source, such as their mother's breast; this helps the baby communicate to caregivers that they are hungry and ready to eat. Rooting disappears around 3 weeks of age.

  The rest of the reflexes have less survival value but are still notable. For the first 3 to 4 months, babies have an amazing grasping ability and reflex. They will grasp anything placed in their palm and hold it with amazing strength for their size; some infants in the first weeks of life can support their entire body weight through that grasp. While this reflex may not have any survival function in modern times, it does help babies bond with caregivers and family in the first weeks of life. Similarly, for the first two months, babies will 'step' with their legs if they are held vertically with their feet touching a surface. Even though this reflex disappears months before babies begin walking purposefully, experts believe stepping helps infants learn how their legs work and can be used. The Moro response is another reflex that is present during the first 6 months of life, but doesn't seem to have a purpose in modern life. A baby will arch her back, flail out, and then curl up if she feels as though she is being dropped. The final reflex this article will mention is the tonic neck. During the first 4 months, when babies lie awake on their backs with their heads facing to one side, they will extend the arm on the side of their body that they're facing and flex the other arm at

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an angle, in a position that resembles a fencing pose. This reflex may help prepare them for voluntary reaching later in their development.

- **Body Size**: During babyhood, these changes are most rapid – faster than they would be at any time after birth. In the first two years, growth is very rapid. From 2 years onwards, the growth rate slows down a bit and is not as rapid as it was up to 2 years of age.
- **Body Proportion**: During infancy, the head of the infant is much larger in proportion to the rest of the body. It constitutes 1/4th of the total body length as compared to 1/8th in the case of adults. The head grows in width up to age 3, but continues to grow in length until eighteen years of age. The growth pattern is the same for body and girls, though boys' heads are slightly larger than girls' heads at every age
- **Changes in Skeletal Structure**: The bones of an infant are soft and flexible as they are composed mainly of cartilages. Cartilages are flexible connective tissue found in many parts of human body, including the joints between bones, the rib cage, the ear, the nose, the elbow, the knee, the ankle, the bronchial tubes and the inter-vertebral discs. It is not as hard and rigid as bone but is stiffer and less flexible than muscle. As the child grows, his/her bones become broader as well as longer. This process of hardening of the bones is known as ossification. It begins early in the first year and ends during puberty. At birth, the infant has approximately 270 bones. Though the bones of an infant do not fracture very easily; they are quite susceptible to deformities as a result of their soft and flexible nature. At birth, girls are more advanced than boys in bone development
- **Teeth**: When the foetus is six week old and when the baby is born, her teeth are already in the process of development. The first teeth usually erupt between 4 and 12 months of age, with the average at seven months. By the age of two and a half years, children have 20 teeth. These teeth are temporary and are often called primary or milk teeth.

4.2.3 Physical Growth During Early Childhood

Early childhood period is more developing period in respect to the cognitive, physical social and language. Erikson, Kohlberg, Piaget, and Bronfenbrenner, explain the more subtle changes that occur inside the body.

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. Children begin to lose their baby fat, or chubbiness, around age 3. Toddlers soon acquire the leaner, more athletic look associated

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with childhood. The child's trunk and limbs grow longer, and the abdominal muscles form, tightening the appearance of the stomach. Even at this early stage of life, boys tend to have more muscle mass than girls. The preschoolers' physical proportions also continue to change, with their heads still being disproportionately large, but less so than in toddlerhood.

3 year old preschoolers may grow to be about 38 inches tall and weigh about 32 pounds. For the next 3 years, healthy preschoolers grow an additional 2 to 3 inches and gain from 4 to 6 pounds per year. By age 6, children reach a height of about 46 inches and weigh about 46 pounds. Of course, these figures are averages and differ from child to child, depending on socioeconomic status, nourishment, health, and heredity factors.

Height: Growth rate slows: the average child in this stage grows 21/2 inches in height and 5-7 pounds per year. By the age of six, the size of the trunk is double from birth. The legs grow at a slower rate than the arms. By 6 years of age, a child's legs equal about half her body length. This ratio remains constant for the rest of his or her life.

Weight: The average annual increase in weight is 3 to 5 pounds. At age 6, children should gain weight approximately six times as much as they did at birth. The average girl weighs 48.5 pounds, and the average boy weighs 49 pounds. Body fat declines during preschool years.

Body build: Body differences are fairly seen during this period. Some children have an endomorphic of flabby, fat body, some have mesomorphic sturdy look, muscular body build and some have an ectomorphic or thin body. Boys have more muscle while girls have more fat. The boy's muscles become larger, stronger, and heavier. Physical growth further slows down in early and middle childhood. By the time a child is 5 years old, she is usually about twice as tall as she was at birth and weight about five times her birth weight. During the next few years, children add about 2 to 3 inches in height and 2 to 3 kilograms in weight each year. At ages, 6 to 8, girls are slightly shorter and lighter than boys. By age 9, this trend reverses in favour of boys. Later, in adolescence period, puberty brings a sharp acceleration in body size.

Motor skills: Gross and fine motor skills progress rapidly. Gross motor skills include running, skipping and jumping. Fine motor skills include turning pages of a book and learning to write and draw.

Brain development: The most important physical development during early childhood is the brain and nervous system growth. Brain and nervous system developments during early childhood also continue to be dramatic. The better developed the brain and nervous systems are the more complex behavioural and cognitive abilities children are capable of.

The brain is comprised of two halves, the right and left cerebral hemispheres. Lateralization refers to the localization of assorted functions, competencies, and skills in either or both hemispheres. Specifically, language,

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writing, logic, and mathematical skills seem to be located in the left hemisphere, while creativity, fantasy, artistic, and musical skills seem to be located in the right hemisphere. Although the hemispheres may have separate functions, these brain masses almost always coordinate their functions and work together.

The two cerebral hemispheres develop at different rates, with the left hemisphere developing more fully in early childhood (ages 2 to 6), and the right hemisphere developing more fully in middle childhood (ages 7 to 11). The left hemisphere predominates earlier and longer, which may explain why children acquire language so early and quickly.

Body proportion and shape: The average preschool child requires 1700 calories per day. Well balanced meals are important in this stage because their diet affects skeletal growth, body shape and susceptibility to disease.

Teeth: During the first four to six months of this stage, the last four baby teeth-the back molars-erupt. During the last half year of early childhood, the baby teeth begin to replace by permanent teeth. When early childhood is over, the child generally has one or two permanent teeth in front and some gaps where permanent teeth will eventually erupt. Around six years of age, most children begin to lose their milk teeth. Beginning with joint teeth, their permanent teeth start erupting. Between the ages 6 to 12, all 20 primary teeth are replaced by permanent ones, with girls losing their teeth slightly earlier than boys. The first teeth to go are the lower and upper front teeth which give many 7-year and 8-year old children a 'toothless' smile. The first molars appear at about the age of 6. These are permanent teeth just behind the milk teeth and are often mistaken for milk teeth.

4.2.4 Factors Affecting the Physical Development of the Child

The following factors affect the physical development of the child:

- **Malnutrition**

Nutrients are the chemical substances in various ways to supply energy, build and maintain body cells and to regulate body processes. There are about 50 essential nutrients grouped into six categories – carbohydrates, proteins, fats, vitamins, minerals and water. Each of these categories is needed by our body and in amounts which are relative to age, activity and body size. School children are active and need three complete/balanced meals a day to stay alert and energetic in their everyday lives. Nutrition is an essential factor that influences growth and development of the child. Of the many environmental factors that influence development, nutrition is one of the most basic aspects. Nutrients are the chemical substances, obtained through food in various ways and are the essential fuels of life. Malnutrition essentially means 'bad nourishment'. It concerns not enough as well as too much food, the wrong types of food, and the body's response to a wide range of infections that

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result in malabsorption of nutrients or the inability to use nutrients properly to maintain health. Clinically, malnutrition is characterized by inadequate or excess intake of protein, energy, and micronutrients such as vitamins, and the frequent infections and disorders that result. People are malnourished if they are unable to utilize fully the food they eat, for example due to diarrhoea or other illnesses (secondary malnutrition), if they consume too many calories (over-nutrition), or if their diet does not provide adequate calories and protein for growth and maintenance (under-nutrition or protein-energy malnutrition)'.

Malnutrition in children is caused by a number of factors; most are related to poverty and poor nutrition. However some of the important factors also include, recurring infection that affect the absorption capacity, in particular recurrent problems of diahorrea and worm infestation affect young children, Incidentally both are preventable through hygienic practices and provision of clean and safe drinking water. Children suffering from malnutrition in the early years have been known to perform at a lower level in tasks involving mental abilities.

Due to poor nutrition, growth of the child's brain and intellect is seriously impaired. Such a child continuously performs poorly at the pre-school and elementary school stages and often parents pull the child out of school. The child thus, misses the chance to continue study and gets caught in the vicious circle of poverty. The impact of malnutrition extends well into adulthood. Malnutrition is more pronounced amongst girls than boys, this is essentially due to the discrimination girls face at homes. Early marriage and early child birth by girls in their early teens is known to produce low weight babies, leading to either mortality or stunted growth. Importantly the lives of young girls are at risk due to early pregnancy. There are many parts in India where girls of elementary school age are married away.

- **Physical Disabilities and Vulnerabilities**

Children may suffer from different types of physical defects and disabilities. The common physical defects are orthopaedic disabilities, unusual auditory and visual difficulties, speech defects, dental causes, and chronic diseases. Physical defects can be present at birth, or may be acquired during childhood due to illness, accident and neglect of the child's physical well being. All these abilities can affect the child's development adversely. The affect on the child will depend on the type and severity of the defect. Diseased tonsils may not have as serious and crippling effect as blindness or some orthopaedic defect.

Disabilities may prevent children from participating in activities with their age groups. Most children with disabilities fail to function as normal children in school and may need special facilities, medical care and attention. It is equally important for the teachers to teach children to be accepting and tolerant of children with special needs. Ignoring or rejecting such children can make them depressed and withdraw from school. These attitudes will

make them disabled children more aware of their disability and result in further maladjustment.

- **Infectious Diseases and Illnesses**

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It is common to find children suffering from infectious diseases and illnesses in schools. Children experience a somewhat higher rate of illnesses such as viral fever, cold and cough during the initial two years of elementary school than they would later due to exposure to other sick children and an under-developed immune system. On average, illness causes children to miss a few days of school per year, but most absences can also be traced to a few students with chronic health problems.

Some children may even suffer from chronic diseases and conditions which include physical disabilities as studied in previous section. Physical discomfort, painful medical treatments and changes in appearance often disrupt the sick child's daily life, making it difficult to concentrate in school and causing withdrawal from peers. For these reasons, chronically ill children are at risk for various cognitive, emotional and social difficulties about which we will study further in the subsequent units.

- **Vision Problems**

The most common vision problem in middle childhood is myopia, or nearsightedness. Heredity contributes to myopia because studies have found that identical twins are more likely to share the condition than fraternal twins. Early biological trauma can also induce it. School-age children with low birth weights show an especially high rate, believed to result from immaturity of visual structures, slower eye growth, and a greater incidence of eye disease.

Myopia progresses more rapidly during the school years when children spend more time reading and doing other close work. Furthermore, it is one of the few health conditions that increase with socio-economic status of child's family. Fortunately, it can be corrected easily with glasses. A teacher can pay more attention to children with vision problems and make them sit near the blackboard so that they don't face problem in reading from the back benches of the classroom. Regular screening for vision permits defects to be corrected before they lead to serious learning difficulties.

- **Accidents and Unintentional Injuries**

The frequency of injury fatalities increases from middle childhood into adolescence, with the rate for boys rising considerably above that for girls. Young school-age children are not yet good at thinking before they act, especially when many stimuli collide on them at once. They need frequent reminders, supervision and prohibition against using electricity materials at home and school, moving into busy traffic on roads and touching with harmful materials on playground.

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As children range farther from home, safety education becomes especially important. School-based programmes with lasting effects use extensive modelling and rehearsal of safety practices; give children feedback on their performance, along with praise and tangible rewards for acquiring safety skills.

Check Your Progress

1. How is maturation different from learning?
2. What are cartilages?
3. State the most important physical development of early childhood.
4. What are the main principles of developmental changes?
5. Define genetic factors.

4.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Maturation is the unfolding of characteristics potentially present in the individual's genetic endowment. On the other hand, learning refers to the relatively enduring changes that come about as a result of experience and practice.
2. Cartilages are flexible connective tissue found in many parts of human body, including the joints between bones, the rib cage, the ear, the nose, the elbow, the knee, the ankle, the bronchial tubes and the inter-vertebral discs.
3. The most important physical development during early childhood is the brain and nervous system growth.
4. The main principles of developmental changes are as follows:
   (a) Growth and development follow an orderly sequence.
   (b) Each child normally passes through a number of stages, each with its own essential characteristics.
   (c) There are individual differences in rate and pattern of development.
   (d) Though the human being develops as a unified whole, yet each part of the body develops at a different rate.
5. Genetic factor refers to what children inherit from their parents which is composed of hereditary traits that are passed on to the child.

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4.4 SUMMARY

- The very visible changes in body size are accompanied by less visible ones in body proportions, skeletal structure, bones, muscles and internal organs of the body.
- The general growth pattern in children involves rapid growth during infancy, slower gains in early and middle childhood, and rapid growth spurt again during adolescence with puberty.
- Growth indicates the quantitative changes in the body structure such as height and weight, and development includes the changes in both the qualitative and quantitative way.
- Development is the continuous series of orderly cohesive transformations. The various types of developmental changes follow certain principles.
- Development is essentially the result of the interaction between maturation and learning.
- While maturation is the 'unfolding of characteristics potentially present in the individual's genetic endowment', learning refers to the relatively enduring 'changes that come about as a result of experience and practice.'
- The most significant signs of physical development are changes in the overall size of the child's body which can be observed through the visible changes in height and weight.
- Genetic factor refers to what children inherit from their parents which is composed of hereditary traits that are passed on to the child.
- Environmental factors like nutrition, socio-economic status, family surroundings, cultural settings, also play an important role in child's physical growth and development.
- The growth in the height and weight are important for determining the normal living of a child.
- Changes in skeletal structure and bones contribute to the overall physical development during childhood.
- The skeletal structure of an infant is soft which is composed mainly of cartilages. It is not as hard and rigid as bone but is stiffer and less flexible than muscle.
- Muscles play an important role in the functioning of body organs like the heart and the digestive system.
- Infants need to learn how to move and to use their bodies to perform various tasks, a process better known as motor development.

- The Moro response is another reflex that is present during the first 6 months of life, but doesn't seem to have a purpose in modern life.
- The bones of an infant are soft and flexible as they are composed mainly of cartilages.
- Cartilages are flexible connective tissue found in many parts of human body, including the joints between bones, the rib cage, the ear, the nose, the elbow, the knee, the ankle, the bronchial tubes and the inter-vertebral discs.
- Early childhood period is more developing period in respect to the cognitive, physical social and language.
- Physical changes in early childhood are accompanied by rapid changes in the child's cognitive and language development.
- Gross motor skills include running, skipping and jumping. Fine motor skills include turning pages of a book and learning to write and draw.
- The most important physical development during early childhood is the brain and nervous system growth.
- Lateralization refers to the localization of assorted functions, competencies, and skills in either or both hemispheres.
- Nutrients are the chemical substances in various ways to supply energy, build and maintain body cells and to regulate body processes.
- Nutrients are the chemical substances, obtained through food in various ways and are the essential fuels of life.
- Malnutrition in children is caused by a number of factors; most are related to poverty and poor nutrition.
- Heredity contributes to myopia because studies have found that identical twins are more likely to share the condition than fraternal twins.

4.5 KEY WORDS

- **Lateralization**: It refers to the localization of assorted functions, competencies, and skills in either or both hemispheres.
- **Motor development**: It refers to a type of development in which infants need to learn how to move and to use their bodies to perform various tasks
- **Nutrients**: It refers to the chemical substances in various ways to supply energy, build and maintain body cells and to regulate body processes.
- **Ossification**: It refers to the process in which the bines become stronger and the length is elongated. This process of hardening of the bones is known as ossification.

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4.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are the most significant changes of physical development in a child?
2. State the two most important factors which determine the normal living of a child.
3. Why is the skeletal structure of an infant soft?
4. What are the two main types of motor skills?
5. How does heredity contribute to myopia?
6. What are the factors which causes malnutrition?

Long Answer Questions

1. Discuss the changes in the physical appearance from infancy to childhood.
2. Explain the role of muscles in the functioning of body organs.
3. Analyse the physical changes which takes place in a child during infancy.
4. What are the various body changes during childhood? Discuss in detail.
5. Identify the factors which affect the physical development of the child.

4.7 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education*. United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

BLOCK - II
DEVELOPMENT OF MOTOR SKILLS

NOTES

UNIT 5 DEVELOPMENT OF BODY PARTS

Structure

5.0 Introduction
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5.2 Physical Development
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5.6 Key Words
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5.0 INTRODUCTION

The human body consists of different types of cells which combine to form tissues. The tissues combine to form organ systems which make the basic structure of human body.

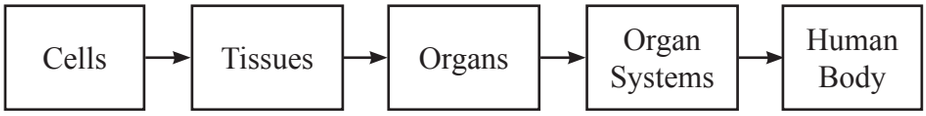

Fig 5.1 *Development of Human Body*

A human body consists of a head, neck, trunk (which includes the thorax and abdomen), arms and hands, legs and feet.

In this unit, the development of head, face, trunk and various parts of the body will be discussed. The development of speech, sight and hearing has also been explained in detail in this unit.

5.1 OBJECTIVES

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

- Discuss the meaning and importance of physical development
- Interpret the modifications in the physical structure of infants
- Explain the development of head, face, palate, height and weight in infants
- Analyse the process of development of language, hearing and sight in infants

5.2 PHYSICAL DEVELOPMENT

The fundamental stage of development is physical development which provides a fundamental skeletal framework for the growth of the human body. Physical development incorporates modifications in the body such as in the brain, muscles, sense organs, bones and so on which further enhances motor development. Emotional development, social development, intellectual development and spiritual development are all based on physical development.

Modifications in Body Size

The most significant indications of physical development are changes in the overall size of the child's body. These changes are faster during infant stage. The pattern of growth remains similar for all the children with difference in the rate of growth.

The genetic and environmental factors affect the growth of body size. Genetic factor includes the hereditary traits inherited from their parents. However, environmental factors like nutrition, socio-economic status, family surroundings, cultural settings, also play an important role in child's physical growth and development.

Changes in Body Proportions

As children grow from infancy to childhood, changes in the body structure are visible from the differences in the proportion of body organs. During infancy, the head of the infant is much larger in proportion to the rest of the body. The growth pattern is the same for body and girls. By the age of six, the trunk (i.e., body minus head) is twice as long and wide as it was at birth. The child gradually becomes slim until pre-puberty, when the body widens out again. The length of the arms and hands increases between 60 to 75 per cent from birth to two years. At the age of 8 years, the arms are nearly 50 per cent larger than what it was at two years and are thin in appearance, giving

the child an all adult's look. The legs grow at a slower rate than the arms. By 6 years of age, a child's legs equal about half her body length. This ratio remains constant for the rest of his or her life. Different parts of the body in children grow at different rates. Some parts of the body attain mature proportions earlier than others. However, by sixteen years of age, different parts of the body assume their mature proportions

Modification in Skeletal Structure, Bones and Muscles

Changes in skeletal structure and bones contribute to the overall physical development during childhood. The bones of an infant are soft and flexible. As the child grows, bones become broader as well as longer. It begins early in the first year and ends during puberty. At birth, the infant has approximately 270 bones. By puberty, this number increases to about 350. During middle childhood, the bones of the body lengthen and broaden. However, ligaments are not yet firmly attached to bones. As their bodies become stronger, many children experience a greater desire to physical exercise. With the increase in size, there is an increase in number of bones as well which leads to increase in weight at all periods of growth. The development of fatty tissues is more prominent in early childhood there is an evident increase in weight. During middle childhood, the muscles of the child are still developing. Children, therefore need constant change of activities to activate different groups of muscles and to relieve fatigue from the tired muscles. The child has better control over her or his muscles and her or his movements become more coordinated, efficient and refined. By adolescence, the small muscles too gain maturity. A nutritious diet and a regular routine with physical activities and proper rest would enhance the healthy development of muscles and fatty tissues in children.

5.2.1 Development of Head

Embryological formation of the head and neck is a complex process that begins very early in human development.

In general, bone tissue originates from the somatic paraxial mesoderm. The differentiation into neural crest leads to the development of skeleton of limbs. The skull forms a protective case surrounding the brain and there is the membranous part consisting of flat bones which is partially derived from neural crest cells. The base of the skull and the capsules of sensory organs originally consist of number of separate cartilages. It is formed mainly from the first two pharyngeal arches.

5.2.2 Development of Face

The development of external face starts between the 4^{th} and 6^{th} week of embryonic development. The development of the face is completed by the 6^{th} week. The palate starts to form between the 6^{th} and 8^{th} week which

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causes a difference between the nasal and oral cavities. This development is completed by the 12th week. There are two important tissue structures involved in development of the nose and face – the **pharyngeal arches** and **neural crest cells**.

During week 3 of embryonic development, an **oropharyngeal membrane** initially appears at the site of the future face.

During the 4th week, the oropharyngeal membrane begins to break down in order to become the future **oral cavity**, and sits at the beginning of the digestive tract.

Nasal development is instigated by the appearance of raised bumps called **nasal placodes** on both sides of the frontonasal prominence. These then invaginate to form nasal pits, with medial and lateral nasal prominences on either side.

As the maxillary prominences expand medially, the nasal prominences are 'pushed' closer to the midline. The **maxillary prominences** then fuse with the nasal prominences – and soon after fuse in the midline to form a continuous central structure.

Prominence	Derivatives
Frontonasal	Forehead, bridge of nose, medial and lateral nasal prominences
Medial nasal	Philtrum, primary palate, upper 4 incisors and associated jaw
Lateral nasal	Sides of the nose
Maxillary (1st pharyngeal arch)	Cheeks, lateral upper lip, secondary palate, lateral upper jaw
Mandibular (1st pharyngeal arch)	Lower lip and jaw

Development of Palate

Initially, the nasal cavity is continuous with the oral cavity. A series of steps lead to their separation, and the establishment of the **palate**. The primary palate is formed by the fusion medial nasal prominence with its contralateral counterpart resulting in the creation of the intermaxillary segment also contributes to the labial component of the philtrum and the upper four incisors. The maxillary prominences expand medially to give rise to the **palatal shelves**. These continue to advance medially, fusing superior to the tongue. Simultaneously, the developing mandible expands to increase the size of the oral cavity; this allows the tongue to drop out of the way of the growing palatal shelves. The palatal shelves then fuse with each other in the horizontal plane, and the nasal septum in the vertical plane, forming the secondary palate.

5.2.3 Development of Height

Length in children who are too young to stand is measured while children lie on their back on a suitable device, such as a measuring table (called a stadiometer). Height in children who can stand is measured using a vertical measuring scale. In general, length in normal-term infants increases about 30 per cent by age 5 months and more than 50 per cent by age 12 months. Infants typically grow about 10 inches (25 centimeters) during the first year, and height at 5 years is about double the birth length. In boys, half the adult height is attained by about age 2. In girls, height at 19 months is about half the adult height.

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5.2.4 Development of Weight

Normal-term newborns typically lose 5 to 8 per cent of their birth weight during the first few days of life. They regain this weight by the end of the first 2 weeks. After this period of time, newborns typically gain about 1 ounce per day during the first 2 months, and 1 pound per month after that. This weight gain typically results in a doubling of birth weight by age 5 months and a tripling by 1 year.

Check Your Progress

1. How is nasal development instigated?
2. What are the environmental factors which affect child's growth and development?
3. How is the primary palate formed of the nasal cavity?

5.3 DEVELOPMENT OF SPEECH OR LANGUAGE DEVELOPMENT

Language development is the process by which children come to understand and communicate language during early childhood. The stages of language development are uniform which can vary from child to child on the basis of achievement of important steps. The ability to understand the language is more rapid than the ability to express the language. Children first learn to speak single words and then join words together, first into two-word sentences and then into three-word sentences.

Infant stage

Language development begins before birth. Towards the end of pregnancy, a fetus begins to hear sounds and speech coming from outside the mother's body. Infants are innately accustomed to the human voice preferring the

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higher pitch characteristic of female voices. They also are very attentive to the human face, especially when the face is talking. Although crying is a child's primary means of communication at birth, language immediately begins to develop via repetition and imitation. Between birth and three months of age, most infants acquire the following abilities:

- Seem to recognize their mother's voice
- Quiet down or smile when spoken to
- Turn toward familiar voices and sounds
- Make sounds indicating pleasure
- Cry differently to express different needs
- Grunt, chuckle, whimper, and gurgle
- Begin to coo (repeating the same sounds frequently) in response to voices
- Make vowel-like sounds such as 'ooh' and 'ah'

Between three and six months, most infants can do the following:

- Turn their head toward a speaker
- Watch a speaker's mouth movements
- Respond to changes in a tone of voice
- Make louder sounds including screeches
- Vocalize excitement, pleasure, and displeasure
- Cry differently out of pain or hunger
- Laugh, squeal, and sigh
- Sputter loudly and blow bubbles
- Shape their mouths to change sounds
- Vocalize different sounds for different needs
- Communicate desires with gestures
- Babble for attention
- Mimic sounds, inflections, and gestures
- Make many new sounds, including 'p', 'b', and 'm', that may sound almost speech-like

Six to 12 months is a crucial age for receptive language development. Between six and nine months babies begin to do the following:

- Search for sources of sound
- Listen intently to speech and other sounds
- Take an active interest in conversation even if it is not directed at them

- Recognize ‘dada’, ‘mama’, ‘bye-bye’
- Consistently respond to their names
- Respond appropriately to friendly and angry tones
- Express their moods by sound and body language
- play with sounds
- Make long, more varied sounds
- Babble random combinations of consonants and vowels
- Babble in singsong with as many as 12 different sounds
- Experiment with pitch, intonation, and volume
- Use their tongues to change sounds
- Repeat syllables
- Imitate intonation and speech sounds

Between nine and 12 months babies may begin to do the following:

- Listen when spoken to
- Recognize words for common objects and names of family members
- Respond to simple requests
- Understand ‘no’
- Understand gestures
- Associate voices and names with people
- Know their own names
- Babble both short and long groups of sounds and two-to-three-syllable repeated sounds (the babble begins to have characteristic sounds of their native language.)
- Use sounds other than crying to get attention
- Use ‘mama’ and ‘dada’ for any person
- Shout and scream
- Repeat sounds
- Use most consonant and vowel sounds
- Practice inflections
- Engage in much vocal play

Toddlerhood

During the second year of life, language development proceeds at very different rates in different children. By the age of 12 months, most children use ‘mama/dada’ appropriately. They add new words each month and temporarily lose words. Between 12 and 15 months children begin to do the following:

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- Recognize names
- Understand and follow one-step directions
- Laugh appropriately
- Use four to six intelligible words, usually those starting with 'b', 'c', 'd', and 'g', although less than 20 percent of their language is comprehensible to outsiders
- Use partial words
- Gesture and speak 'no'
- Ask for help with gestures and sounds

At 15 to 18 months of age children usually do the following:

- Understand 'up', 'down', 'hot', 'off'
- Use 10 to 20 intelligible words, mostly nouns
- Use complete words
- Put two short words together to form sentences
- Chatter and imitate, use some echolalia (repetitions of words and phrases)
- Have 20 to 25 percent of their speech understood by outsiders

At 18 to 24 months of age toddlers come to understand that there are words for everything and their language development gains momentum. About 50 of a child's first words are universal: names of foods, animals, family members, toys, vehicles, and clothing. Usually children first learn general nouns, such as 'flower' instead of 'dandelion', and they may overgeneralize words, such as calling all toys 'balls'. Some children learn words for social situations, greetings, and expressions of love more readily than others. At this age children usually have 20 to 50 intelligible words and can do the following:

- Follow two-step directions
- Point to parts of the body
- Attempt multi-syllable words
- Speak three-word sentences
- Ask two-word questions
- Enjoy challenge words such as 'helicopter'
- Hum and sing
- Express pain verbally
- Have 50 to 70 percent of their speech understood by outsiders

After several months of slower development, children often have a 'word spurt' (an explosion of new words). Between the ages of two and 18 years,

it is estimated that children add nine new words per day. Between two and three years of age children acquire:

- A 400-word vocabulary including names
- A word for most everything
- The use of pronouns
- Three to five-word sentences
- The ability to describe what they just saw or experienced
- The use of the past tense and plurals
- Names for body parts, colors, toys, people, and objects
- The ability to repeat rhymes, songs, and stories
- The ability to answer 'what' questions

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Children constantly produce sentences that they have not heard before, creating rather than imitating. This creativity is based on the general principles and rules of language that they have mastered. By the time, a child is three years of age; most of a child's speech can be understood. However, like adults, children vary greatly in how much they choose to talk.

Preschool

Three to four-year-olds usually can do the following:

- Understand most of what they hear
- Converse
- Have 900 to 1,000-word vocabularies, with verbs starting to predominate
- Usually talk without repeating syllables or words
- Use pronouns correctly
- Use three to six-word sentences
- Ask questions
- Relate experiences and activities
- Tell stories (occasional stuttering and stammering is normal in preschoolers.)

Language skills usually blossom between four and five years of age. Children of this age can do the following:

- Verbalize extensively
- Communicate easily with other children and adults
- Articulate most English sounds correctly
- Know 1,500 to 2,500 words
- Use detailed six to eight-word sentences

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- Can repeat four-syllable words
- Use at least four prepositions
- Tell stories that stay on topic
- Can answer questions about stories

School age

At age five most children can do the following:

- Follow three consecutive commands
- Talk constantly
- Ask innumerable questions
- Use descriptive words and compound and complex sentences
- Know all the vowels and consonants
- Use generally correct grammar

Six-year-olds usually can correct their own grammar and mispronunciations. Most children double their vocabularies between six and eight years of age and begin reading at about age seven. A major leap in reading comprehension occurs at about nine. Ten-year-olds begin to understand figurative word meanings.

Adolescents generally speak in an adult manner, gaining language maturity throughout high school.

5.3.1 Development of Hearing

The first two year is the time during which hearing develops in children.

From birth till 4 years of age:

- Move or react when someone speaks or in response to any noise
- Startle when there is a very loud noise

By seven months a baby should:

- Turn his/her head towards a voice or a noise(when a parent calls even without being seen)
- Stir or move in response to a noise or voice
- Startle when there is a large sound

By 9 months a baby should:

- Turn his/her head to find out where a sound is coming from
- Turn around if a parent is calling from behind
- Stir or move in response to voice or any sound
- Startle when there is a very loud noise

At 12 months a baby should:

- Turn his/her head in all directions and show an interest in a person's voice or a particular sound
- Repeat sounds that parents make
- Startle in response to a loud noise

At 2 years of age a child should:

- Be able to point out a part of his body when asked without seeing that person's lips move
- Be able to point to the right picture when asked (for example: Where is the cat? Where is the bird?)
- Be able to do simple tasks like give you one of his/her toys when asked, without seeing that person's lips move.

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5.3.2 Development of Sight

Babies learn to see over a period of time and are not born with all the visual abilities required in life. The ability to focus their eyes and their movement with accuracy has to be acquired. The coordination of the brain and the eyes has to be learned.

Healthy eyes and good vision have a crucial role development of the sight of children. Eye and vision problems in infants can cause developmental delays. It is important to detect any problems early to ensure babies have the opportunity to develop the visual abilities they need to grow and learn.

Parents play an important role in helping to assure their child's eyes and vision can develop properly. The steps that a parent should take include:

- Watching for signs of eye and vision problems.
- Seeking professional eye care starting with the first comprehensive vision assessment at about 6 months of age.
- Helping their child develop his or her vision by engaging in age-appropriate activities.
- At birth, babies can't see as well as older children or adults. Their eyes and visual system aren't fully developed. But significant improvement occurs during the first few months of life.
- The following are some milestones to watch for in vision and child development. It is important to remember that not every child is the same and some may reach certain milestones at different ages.

Birth to four months

- At birth, babies' vision is abuzz with all kinds of visual stimulation. While they may look intently at a highly contrasted target, babies have

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not yet developed the ability to easily tell the difference between two targets or move their eyes between the two images. Their primary focus is on objects 8 to 10 inches from their face or the distance to parent's face.

- During the first months of life, the eyes start working together and vision rapidly improves. Eye-hand coordination begins to develop as the infant starts tracking moving objects with his or her eyes and reaching for them. By eight weeks, babies begin to more easily focus their eyes on the faces of a parent or other person near them.
- For the first two months of life, an infant's eyes are not well coordinated and may appear to wander or to be crossed. This is usually normal. However, if an eye appears to turn in or out constantly, an evaluation is warranted.
- Babies should begin to follow moving objects with their eyes and reach for things at around three months of age.

Five to eight months

- During these months, control of eye movements and eye-body coordination skills continue to improve.
- Depth perception, which is the ability to judge if objects are nearer or farther away than other objects, is not present at birth. It is not until around the fifth month that the eyes are capable of working together to form a three-dimensional view of the world and begin to see in depth.
- Although an infant's color vision is not as sensitive as an adult's, it is generally believed that babies have good color vision by five months of age.
- Most babies start crawling at about 8 months old, which helps further develop eye-hand-foot-body coordination. Early walkers who did minimal crawling may not learn to use their eyes together as well as babies who crawl a lot.

Nine to twelve months

- At around 9 months of age, babies begin to pull themselves up to a standing position. By 10 months of age, a baby should be able to grasp objects with thumb and forefinger.
- By twelve months of age, most babies will be crawling and trying to walk. Parents should encourage crawling rather than early walking to help the child develop better eye-hand coordination.
- Babies can now judge distances fairly well and throw things with precision.

One to two years old

- By two years of age, a child's eye-hand coordination and depth perception should be well developed.
- Children this age are highly interested in exploring their environment and in looking and listening. They recognize familiar objects and pictures in books and can scribble with crayon or pencil.

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The presence of eye and vision problems in infants is rare. Most babies begin life with healthy eyes and start to develop the visual abilities they will need throughout life without difficulty. But occasionally, eye health and vision problems can develop. Parents need to look for the following signs that may be indications of eye and vision problems:

- **Excessive tearing**: It may indicate blocked tear ducts.
- **Red or encrusted eye lids**: It could be a sign of an eye infection.
- **Constant eye turning**: It may signal a problem with eye muscle control.
- **Extreme sensitivity to light**: It may indicate an elevated pressure in the eye.
- **Appearance of a white pupil**: It may indicate the presence of an eye cancer.

The appearance of any of these signs should require immediate attention by your pediatrician or optometrist.

Check Your Progress

4. What are the various abilities which a child may acquire between birth to three months of age?
5. How does eye-hand coordination takes place in infants?
6. What are the signs which indicate eye and vision problems?

5.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Nasal development is instigated by the appearance of raised bumps called **nasal placodes** on both sides of the frontonasal prominence. It then invaginate to form nasal pits, with medial and lateral nasal prominences on either side.
2. The environmental factors which affect child's growth and development are nutrition, socio-economic status, family surroundings, and cultural settings.

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3. The primary palate is formed by the fusion medial nasal prominence with its contralateral counterpart resulting in the creation of the intermaxillary segment also contributes to the labial component of the philtrum and the upper four incisors.
4. The various abilities which a child may acquire between birth to three months of age are as follows:
   (a) Seem to recognize their mother's voice
   (b) Quiet down or smile when spoken to
   (c) Turn toward familiar voices and sounds
   (d) Make sounds indicating pleasure
5. Eye-hand coordination begins to develop as the infant starts tracking moving objects with his or her eyes and reaching for them. By eight weeks, babies begin to more easily focus their eyes on the faces of a parent or other person near them.
6. The signs which indicate eye and vision problems are as follows:
   (a) **Excessive tearing**: It may indicate blocked tear ducts.
   (b) **Red or encrusted eye lids**: It could be a sign of an eye infection.
   (c) **Constant eye turning**: It may signal a problem with eye muscle control.
   (d) **Extreme sensitivity to light**: It may indicate an elevated pressure in the eye.
   (e) **Appearance of a white pupil**: It may indicate the presence of an eye cancer.

5.5 SUMMARY

- The fundamental stage of development is physical development which provides a fundamental skeletal framework for the growth of the human body.
- Physical development incorporates modifications in the body such as in the brain, muscles, sense organs, bones and so on which further enhances motor development.
- The most significant indications of physical development are changes in the overall size of the child's body.
- The genetic and environmental factors affect the growth of body size. Genetic factor includes the hereditary traits inherited from their parents.
- As children grow from infancy to childhood, changes in the body structure are visible from the differences in the proportion of body organs.

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- During infancy, the head of the infant is much larger in proportion to the rest of the body. The growth pattern is the same for body and girls.
- Changes in skeletal structure and bones contribute to the overall physical development during childhood.
- The development of fatty tissues is more prominent in early childhood there is an evident increase in weight.
- Embryological formation of the head and neck is a complex process that begins very early in human development.
- The development of external face starts between the 4th and 6th week of embryonic development. The development of the face is completed by the 6th week.
- During the 4th week, the oropharyngeal membrane begins to break down in order to become the future **oral cavity**, and sits at the beginning of the digestive tract.
- Nasal development is instigated by the appearance of raised bumps called **nasal placodes** on both sides of the frontonasal prominence.
- Initially, the nasal cavity is continuous with the oral cavity. A series of steps lead to their separation, and the establishment of the **palate**.
- Length in children who are too young to stand is measured while children lie on their back on a suitable device, such as a measuring table (called a stadiometer).
- Normal-term newborns typically lose 5 to 8 per cent of their birth weight during the first few days of life.
- Language development is the process by which children come to understand and communicate language during early childhood.
- The stages of language development are uniform which can vary from child to child on the basis of achievement of important steps.
- Language development begins before birth. Towards the end of pregnancy, a fetus begins to hear sounds and speech coming from outside the mother's body.
- During the second year of life, language development proceeds at very different rates in different children.
- At 18 to 24 months of age toddlers come to understand that there are words for everything and their language development gains momentum.
- Children constantly produce sentences that they have not heard before, creating rather than imitating.
- Most children double their vocabularies between six and eight years of age and begin reading at about age seven.

NOTES

- Adolescents generally speak in an adult manner, gaining language maturity throughout high school.
- Babies learn to see over a period of time and are not born with all the visual abilities required in life.
- The ability to focus their eyes and their movement with accuracy has to be acquired. The coordination of the brain and the eyes has to be learned.
- Healthy eyes and good vision have a crucial role development of the sight of children. Eye and vision problems in infants can cause developmental delays.
- The presence of eye and vision problems in infants is rare. Most babies begin life with healthy eyes and start to develop the visual abilities they will need throughout life without difficulty.

5.6 KEY WORDS

- **Depth perception**: It refers to the ability to judge if objects are nearer or farther away than other objects, is not present at birth.
- **Language development**: It refers to the process by which children come to understand and communicate language during early childhood.
- **Physical development**: It refers to a process which starts in human infancy and continues into late adolescent concentrating on gross and fine motor skills as well as puberty.
- **Social development**: It refers a process which focuses on the way in which people develop social and emotional skills across the lifespan, with particular attention to childhood and adolescence.

5.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are the various changes which takes place in the skeletal structure of an infant?
2. How does height and weight develop in infants?
3. What are the various sounds which a child learns in toddlerhood?
4. How can parents help to improve the vision of children?
5. How does eye-hand-foot-body coordination takes place in infants?

Long Answer Questions

1. Discuss the development of face in infants.
2. Explain the process of language development in infants.
3. Anlayse the process of development of hearing in children.
4. 'The genetic and environmental factors affect the growth of body size'. Discuss in detail.

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5.8 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 6 OVERVIEW OF MOTOR SKILLS

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Structure

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6.1 Objectives
6.2 Development of Gross Motor Skills
6.2.1 Development of Fine Motor Skills
6.3 Motor Development
6.3.1 Development of Skills like Running, Jumping, Skipping and Hopping
6.3.2 Promotion of Development of Motor Skills
6.4 Answers to Check Your Progress Questions
6.5 Summary
6.6 Key Words
6.7 Self Assessment Questions and Exercises
6.8 Further Readings

6.0 INTRODUCTION

A motor skill is a function involving the precise movement of muscles with the intention of performing a specific act. Motor skills are movements and actions of the muscles. Typically, they are categorized into two groups: gross motor skills and fine motor skills.

Gross motor skills are involved in movement and coordination of the arms, legs, and other large body parts and movements. Gross motor skills can be further divided into two subgroups of locomotor skills and object control skills. Gross locomotor skills include running, jumping, sliding, and swimming. Object control skills include throwing, catching and kicking.

Fine motor skills are involved in smaller movements that occur in the wrists, hands, fingers, and the feet and toes. They participate in smaller actions such as picking up objects between the thumb and finger, writing carefully, and even blinking. These two motor skills work together to provide coordination. Less developed kids focus on their gross movements; while more developed kids have more control over their fine movements. Motor development is defined as the development of a child's bones and muscles and their ability to manipulate his or her environment.

In this unit, the meanings of gross motor skills and fine motor skills and their components have been discussed. The ways in which one can improve these skills has also been highlighted. The unit will also discuss the meaning of motor development and the components of self-care skills.

6.1 OBJECTIVES

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

- Discuss the meaning of gross motor skills and fine motor skills
- Identify the components of gross motor skills and fine motor skills
- Explain the ways in which one can improve gross and fine motor skills
- Analyse the concept of motor development and its principles
- Interpret the development of self-care skills

6.2 DEVELOPMENT OF GROSS MOTOR SKILLS

Gross motor skills are those skills which require whole body movement and which involve the large (core stabilising) muscles of the body to perform everyday functions, such as standing, walking, running, and sitting upright. It also includes eye-hand coordination skills such as ball skills (throwing, catching, and kicking).

Importance of Gross Motor Skills

Gross motor skills are important to enable children to perform every day functions, such as walking, running, skipping, as well as playground skills (for example, climbing) and sporting skills (for example, catching, throwing and hitting a ball with a bat). These are crucial for everyday self-care skills like dressing (where you need to be able to stand on one leg to put your leg into a pant leg without falling over). Gross motor abilities also have an influence on other everyday functions. For example, a child's ability to maintain table top posture (upper body support) will affect their ability to participate in fine motor skills (for example, writing, drawing and cutting) and sitting upright to attend to class instruction, which then impacts on their academic learning. Gross motor skills impact on your endurance to cope with a full day of school (for example, sitting upright at a desk, moving between classrooms, carrying your heavy school bag).

Basic Components of Gross Motor Skills

The following are the basic components of gross motor skills:

- **Muscular strength**: The ability to exert force against resistance.
- **Muscular endurance**: The ability of a muscle or group of muscles to exert force repeatedly against resistance.
- **Motor (muscle) planning**: The ability to move the body with appropriate sequencing and timing to perform bodily movements with refined control.

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- **Motor learning**: A change in motor (muscle) behaviour resulting from practice or past experience.
- **Postural control**: The ability to stabilize the trunk and neck to enable coordination of other limbs.
- **Sensory processing:** Accurate registration, interpretation and response to sensory stimulation in the environment and one's own body.
- **Body awareness**: Knowing body parts and understanding the body's movement in space in relation to other limbs and objects.
- **Balance**: The ability to maintain position whether that is static, dynamic (moving) or rotational.
- **Coordination**: Ability to integrate multiple movements into efficient movement.
- **Crossing Mid-line**: The ability to cross the imaginary line running from the child's nose to pelvis that divides the body into left and right sides.
- **Proprioception**: This is information that the brain receives from our muscles and joints to make us aware of body position and body movement.
- **Muscle Tone**: The resting muscle tension of a muscle which is the continuous and passive partial contraction of the muscles.

Identification of Improper Development of Gross Motor Skills

The following signs can indicate an improper development of gross motor skills:

- Be late in reaching developmental milestones (i.e. sit, crawl, walk, run and hop).
- Move stiffly and lacks fluid body movement or alternatively looks awkward and appears clumsy.
- Avoid physical activity.
- Participate in physical activity for only short periods (have low endurance).
- Cannot maintain an upright posture when sitting on a mat or at a table top.
- Be unable to perform the same skills as their peers (for example, catch, kick, hop and jump).
- Appear less skilful than their peers in sports.
- Be unable to follow multiple step instructions to complete a physical task (for example, obstacle course).

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- Be unable to plan and correctly sequence events or steps in a process (e.g. step forward before throwing).
- Fail to perform movements safely (for example, climbing).
- Need to put in more effort than their peers to complete a task.
- Tire frequently with physical activity. Lose previously mastered skill if they do not keep practicing them.
- Be unable to 'generalise' or transfer a skill (use the same skill in a different setting/way) (for example, can drawing and pencil skills lacking in a skilful outcome.
- Writing and drawing for long periods of time.
- Activities of Daily Living (dressing independently, holding and using cutlery).
- Maintaining posture while sitting on the floor or at a table.
- Low energy levels.
- Seem tired or lethargic and take longer to respond to stimuli around them.
- Sensory processing (responding appropriately to the environment).
- Chewing and swallowing food. Easily change between throwing a big/heavy ball to a light/small ball). Dribbling inappropriately.
- Demonstrate poor articulation of sounds.
- Difficulties with manipulation of small toys and utensils.

Improvement of Gross Motor Skills

The following actions can help in improving the gross motor skills:

- Hop Scotch for hopping, or other games that encourage direct task/skill practice.
- Simon Says for body awareness and movement planning (praxis).
- Wheelbarrow walking races for upper body strength and postural or trunk control.
- Walking/climbing over unstable surfaces (for example, large pillows) as it requires a lot of effort and increases overall body strength.
- Standing with one foot on a ball while catching another ball (encourages balance while practicing catching and throwing).
- Begin catching with a large ball/balloon and only after the skill is mastered, move to a smaller sized ball.
- To combine lots of gross motor skills together into one practice.
- Playground climbing and swinging
- Swimming

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6.2.1 Development of Fine Motor Skills

Fine motor skills include the usage of the smaller muscles of the limbs. The efficiency of fine motor skills influences the quality of the task outcome as well as the speed of task performance significantly. A number of independent skills are required to happen together for appropriate manipulation the object or perform the task.

Importance of Fine Motor Skills

Fine motor skills are essential for performing everyday skills like self-care tasks (for example, clothing fastenings, opening lunch boxes, cleaning teeth, using cutlery) and academic skills (for example, pencil skills of drawing, writing and colouring, as well as cutting and pasting). Without the ability to complete these every day tasks, a child's self esteem can suffer and their academic performance is compromised. They may also be unable to develop appropriate independence in life skills (such as getting dressed and feeding themselves).

Basic Components of Fine Motor Skills

The following are the basic components of fine motor skills:

- **Bilateral Integration:** Using two hands together with one hand leading (for example, opening a jar lid with hand while the other hand helps to by stabilising the jar).
- **Crossing Mid-line:** The ability to cross the imaginary line running from a child's nose to pelvis that divides the body into left and right sides.
- **Hand and finger strength:** An ability to exert force against resistance using the hands and fingers that allows the necessary muscle power for controlled movement.
- **Hand eye coordination:** The ability to process information received from the eyes to control, guide and direct the hands in the performance of a task such as handwriting.
- **Hand Dominance:** The consistent use of one (usually the same) hand for task performance which allows refined skills to develop.
- **Hand division:** Using just the thumb, index and middle finger for manipulation, leaving the fourth and little finger tucked into the palm not participating but providing stability for the other 3 fingers.
- **Object Manipulation:** The ability to skilfully manipulate tools (such as the ability to hold and move pencils and scissors with control) and the controlled use of everyday tools such as a toothbrush, hairbrush, and cutlery.

- **Body Awareness (Proprioception):** Information that the brain receives from our muscles and joints to make us aware of our body position and body movement, so we can accurately control our movements.

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Identification of Improper Development of Fine Motor Skills

When a child has fine motor skill difficulties, they might also have difficulties with:

- **Behaviour:** They may avoid or refuse to participate in fine motor tasks.
- **Frustration** with precise eye and hand coordination tasks.
- **Avoidance of these tasks:** Preferring to get others to perform fine motor tasks for them under their direction, rather than actually doing themselves (for example, 'Daddy, draw me a house', or 'build me a rocket' with refusal to do it themselves).
- **Showing academic ability:** Being verbally very skilled but having difficulty showing this on paper (i.e. writing, drawing or colouring).
- **Self esteem:** When they compare their own skills to those of their same aged peers.
- **Academic performance:** The ease with which a student is able to complete academic tasks.
- **Computer skills:** The ability to competently use a computer for the purpose of academic tasks.

Improvement of Fine Motor Skills

The following are the ways in which one can improve the fine motor skills.

- **Threading and lacing:** With a variety of sized laces and beads.
- **Tongs or teabag squeezers:** To pick up objects (for example, put marbles down a marble maze).
- **Manipulation games:** Such as 'Pick up Sticks' and 'Connect 4'.
- **Play-dough:** Using the fingers, not the hands as whole; working with the Play-dough up in the air, not flat on the table.
- **Construction:** That requires pushing and pulling with fingers (for example, 'Mobilo', 'K'nex' or 'Lego').
- **Storing construction materials**: In jars with screw lids that need to be opened and closed as the materials are needed and when packed away.
- **Craft:** Make things using old boxes, egg cartons, wool, paper and sticky or masking tape.

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Difference between Gross Motor Skills and Fine Motor Skills

By definition, gross motor skills are the skills learned and acquired when a person is still a baby up until early childhood, which is part of an individual's motor development. Once a child reaches the age of two, they will be able to stand up, walk, run, and walk up the stairs. Such skills are developed throughout early childhood and will continue to be controlled throughout the years of development into adulthood. It is safe to say that gross motor skills come from a huge group of muscles and the movement of the entire body. Fine motor skills pertain to the coordination of muscle movements in the body like the eyes, toes, fingers and so on. They allow one to write, grasp small objects, and fasten clothing. Fine motor skills enhance one's strength, fine motor control, and dexterity in the hands. Both fine and gross motor skills can be assessed. This is assessed using the Peabody Motor scale, most commonly known as a PDHS-2. The child would have to stand up as instructed by the therapist. This is to assess their stationary position, which requires them to take a 30-item test that would assess their locomotion as well. Babies can lift their heads up and gradually sit upright. The child would then have to crawl, stand, and walk. This is the assessment of the child's ability to move with some assistance, like the other children their age. Additionally, the therapist may check the child's ability to throw, catch, and kick a ball. Lastly, they will conduct a visual motor perceptive ability test.

Both gross and fine motor skills are essential to the physical and mental development of a child. What you can do is enhance these motor skills by incorporating activities into your child's life. Fine motor skills can be developed by giving them a paper and crayons; this will enhance the dexterity of their hands. Choose activities that can keep their hands busy. As for gross motor skills, you can allow your child to play outside with a ball. Another good activity would be to take them to the park and play in the playground just like the other children.

Check Your Progress

1. What are gross motor skills?
2. List the basic components of fine motor skills.
3. How can one assess the gross and fine motor skills?

6.3 MOTOR DEVELOPMENT

Motor development refers to the enhancement and development of strength, speed and accuracy in the use of limbs and other body muscles. It is an important part in an individual's physical development as it affects their mental, social and emotional development.

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General Principles of Motor Development

The following are the important principles of moral development:

- **General to Specific Trends:** Initially, the movement is made by the entire body which later is done by specified parts.
- **From larger to smaller muscles:** The larger muscles are developed first which facilitates the learner to gain co-ordinated control.
- **Cephalocaudal and proximo-distal growth:** This implies that the growth first happens from head to toe in a sequential manner. The proximo-distal means that growth happens from the centre of the body till the extremeties of the body.

Factors Affecting Motor Development

The factors which affect motor development are as follows:

- **Heredity:** Children get 'genes' for all the developments from their parents. It has been seen motor development of a child follows the same pattern as of his parents.
- **Nutrition:** Nutritious food promotes good motor development. Sensory motor development is dependent upon nutrition that the child gets to a great extent. Children get stronger and development is good if they get nutritious food.
- **Immunisation**: If mother and child both are immunized at a proper time it leads to good sensory motor development.
- **Environment:** Encouragement, love and security help the child to take risk to explore fearlessly and to know more about environment which leads to a better sensory development.
- **Opportunities:** Children who get more opportunities to do more activities, motor development is better in them. Opportunities to play to gain knowledge give a better chance of developing sensory motor activities.

Development of Motor Abilities and Skills

The following are the ways in which motor abilities and skills can be developed:

(a) Large Muscle Activities

One of the most important milestones in a child's life is walking. Walking enables the child to move around more efficiently and frees her hands, thus enabling her to explore and manipulate the things around her.

Delay in walking may be an indication of some kind of problem with the child, related to her physical, mental or socio-emotional well-being.

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The average age for unassisted walking is between 13 and 14 months. Some children, however, may start walking a little earlier or later than this. The ability, to walk develops in a series of stages.

As the child reaches preschool years, she discovers that she can do many things as there are great advances in strength, speed and coordination.

By about age five she is capable of jumping, running and climbing. Between 2 and 5, children's play consists largely of these large muscle activities. By the age of 6, most children have mastered the basic motor skills such as sitting, walking, running, jumping, pushing, pulling, grasping and throwing. They can balance themselves on a rail, a wall and a chalk mark on the floor.

Children of 6, 7 and 8 years continue to enjoy strenuous physical activity. Any activity that uses the large muscles is likely to be enjoyed by all children of these ages. Games that involve running, jumping and climbing are enjoyed more than sitting. Sitting involves less of physical activity.

(b) Fine Muscle Activities

By 5 or 6 years of age children are ready to begin to coordinate fingers and hands in simple small muscle activities, such as writing, sewing and craft work. At this age, the fine motor skills that a child has are rudimentary. However, these improve as the child grows. From age 6 to 10, there is a progressive improvement in the attainment of these skills. If given the opportunity to learn and practice, children can easily acquire these skills.

There is a great variation in the achievement of fine motor skills. The child learn to do the things for which, he or she has the ability, the opportunity to practice and is given encouragement for accomplishment.

There is a steady improvement in the acquisition of fine motor skills by the child as she grows. The child gains better-control over her eye and hand movements. By 6 years of age, most children can make objects out of paper or clay, do simple craft work, and sewing and write. Improvement in these skills continues not only during middle childhood but also in late childhood and adolescence.

There may be however, a great variation in the motor skills in individual children. A child of 9 may still be doing what another did at 6. This is because the acquisition of fine motor skills depends upon the ability, opportunity and practice that vary from child to child.

The pattern of development of motor skills is the same for girls and boys, but generally boys are found to be better in all physical activities as compared to girls. This could be due to the fact that boys have larger muscles and more strength than girls. This may also be due to cultural reasons, as

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boys are usually encouraged to participate in sports and games and task that involve a lot of physical activities. Girls on the other hand are encouraged to play quiet games and do more of activities that involve fine motor skills. The teacher should try to avoid this kind of discrimination and encourage boys and girls equally to participate in all kinds of activities.

Development of Prehension

Prehension is the ability to grasp objects with the forefinger and thumb working smoothly in opposition. Without the development of prehension, skilled activities such as those mentioned above would be difficult to perform.

The infant is born with the ability to grasp objects. By eight or nine months the forefinger and thumb work smoothly in opposition and the infant can pick up and hold small things. Eye-hand coordination also improves. It is common to see one-year-old crawling and picking up small things like pebbles, seeds, grains and so on from the floor and putting them into the mouth.

By the time the child reaches preschool, she or he becomes capable of performing more complete tasks. She or he likes to touch, handle and manipulate everything around her or him. This is the age when children ask endless questions, wanting to know everything about the world around them.

Handedness

Handedness means predominant use of one hand over the others. Most babies feel equally at ease with and are able to use both hands, but by the age of two, they will show a definite preference for either the left or the right hand. People are said to be right handed if they use the right hand most, or left handed if they favour the left hand. People are referred to as ambidextrous if they use both hands equally well.

Right or left handedness does not make any difference to a person's intelligence, skills or personality. But children who have been forced to change show some difficulties like stuttering and stammering or reading disorders. In cases where handedness appears to persist, the best way is to allow the child to pursue his/her natural pattern of development. But if you decide to change, start when the child is as young as possible. Do it gently and subtly and watch for difficulties. If there is resistance or difficulty, the effort should not be pursued.

Whether handedness is hereditary or the result of training and social conditioning has been debated for many generations. However, there is no conclusive evidence available to decide in the issue either way.

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6.3.1 Development of Skills like Running, Jumping, Skipping and Hopping

While all children are different, and develop physical skills, from walking up stairs to jumping rope to catching a ball, at different speeds. Most, however, will acquire motor skills along the age-by-age timeline listed in the following section.

2 to 3 years old:

- Walk up and down stairs; jump off one step
- Kick a ball
- Stand and walk on tiptoe
- Run; dodge

3 to 4 years old:

- Walk backward and forward unselfconsciously; turn and stop well
- Jump off low steps or objects, but find it hard to jump over objects
- Begin to ride and pump on swings
- Stand on one foot unsteadily; balance with difficulty on low four-inch balance beam while watching their feet

4 to 5 years old:

- Skip unevenly; run well
- Stand on one foot for five seconds or more; master the low balance beam
- Alternate feet when walking down stairs; judge well when placing feet on climbing structures
- Jump on a small trampoline
- Show awareness of things in environment (such as cars on the street), but still need supervision and help protecting self
- Have increased endurance in play

5 to 6 years old:

- Walk backward quickly; skip and run with agility and speed
- Incorporate motor skills into games
- Walk a two-inch balance beam easily; jump over objects
- Hop well; jump down several steps; jump rope
- Climb well; coordinate movements for swimming or bike riding
- Show uneven perceptual judgment

- Have high energy levels in play and rarely show signs of fatigue; find inactivity difficult and seek active games and environments

7 years old and up:

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- Have increased coordination for catching and throwing
- Be able to participate in active games with rules
- Sequence motor activities, as with gymnastics or shooting baskets
- Have improved reaction time in responding to thrown balls or oncoming vehicles

Development of Climbing Skills

Climbing is a skill which children master incrementally, as they reach developmental milestones for various gross motor skills. Climbing typically begins with crawling over objects, progresses to climbing onto objects such as furniture and is fully mastered when children are able to walk down stairs unassisted using alternating feet. There are several components of motor development that contribute to a child's ability to climb

Stair Climbing

Stairs are difficult for children to master. Babies as young as 6 months old may try to crawl up stairs, but are typically not coordinated enough to do so without falling. When children have been walking competently for a few months, usually at about 15 or 16 months old -- they can walk up stairs with adult assistance. They then progress to walking up stairs using handrails at about 2 years of age. The final stage in this development is the ability to climb down stairs without assistance. Children first do this between 2 and 3 years and often do not alternate their feet. By 3, most children can walk down stairs alternating their feet.

Advanced Climbing

Climbing tasks such as climbing ladders are complex tasks that require children to have good balance and coordination as well as enough strength to hold themselves upright while climbing. The age at which children are capable of completing these tasks is often heavily influenced by the child's environment. Children with active parents who help them learn to climb can frequently climb playground ladders between 3 and 4, though they should always be supervised. Full climbing skills often do not develop until children are school-aged, around 6 or 7 years.

Development of Self-care Skills

Self-care skills are the daily tasks done by children for participating in life activities. These skills are expected to be developed in the children gradually as they mature.

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Self-care skills facilitate children in development of the ability to plan and sequence task performance, to organise the necessary materials and to develop the refined physical control required to carry out daily tasks. They are precursors for many school related tasks as well as life skills.

Basic Components of Self-care Skills

The following are the basic components of self-care skills:

- **Hand and finger strength:** An ability to exert force against resistance using the hands and fingers for utensil use.
- **Hand control:** The ability to move and use the hands in a controlled manner such as cutlery use for eating.
- **Sensory processing:** Accurate registration, interpretation and response to sensory stimulation in the environment and one's own body.
- **Object manipulation:** The ability to skilfully manipulate tools, including the ability to hold and move pencils and scissors with control, controlled use of everyday tools such as a toothbrush, hairbrush, and cutlery.
- **Expressive language (using language):** The use of language through speech, sign or alternative forms of communication to communicate wants, needs, thoughts and ideas
- **Planning and sequencing:** The sequential multi-step task/activity performance to achieve a well-defined result (for example, dressing and teeth cleaning).
- **Receptive language (understanding):** Comprehension of language.
- **Compliance:** Ability to follow simple adult-directed routines (i.e. doesn't demonstrate avoidance behaviours where the child simply does not want to do it because an adult is telling them to do it and interrupting what they were doing).

Strategies for Improvement of Self-care Skills

The following steps can be taken to improve self-care skills:

- **Visual schedule**: For the steps involved.
- **Reward chart**: For independent completion of tasks (or attempt at, in the early stages).
- **Small steps:** Breaking down self-care skills into smaller steps and supporting the child through each step so that, in time, they can do more for themselves.
- **Routine:** Use the same routine or strategy each time you complete the same task to help them learn it faster.

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- **Consistency:** Be consistent with the words and signs used to assist the child, and keep instructions short and simple.
- **Allow enough time:** Ensure that there is enough time available for the child to participate in self-care activities without feeling rushed (for example, practice dressing on the weekend to start with before then doing it before rushing to preschool or school).
- **Small parts of activities:** Practice doing a small part of a task each day as it is easier to learn new skills in smaller sections.
- **Observation:** Have your child to observe other family members performing everyday self-care skills.
- **Role play**: Self-care tasks such as eating, dressing or brushing teeth with teddy bears. Doing it on others can help learning it before then doing it on yourself.
- **Take care of others:** Allow the child to brush your hair or teeth first, before brushing their own.
- **Timers:** To indicate how long they must tolerate an activity they may not enjoy, such as teeth cleaning.

6.3.2 Promotion of Development of Motor Skills

According to developmental experts, manual dexterity is directly tied to cognitive development:

0 to 3 Months: Most of the hand movement that occurs during the first three months is involuntary.

Helping Hands

- Stroke the backs of his or her knuckles with a rattle. Then, as his or her fingers open, place it gently in his or her palm. In the beginning, he or she will not be able to hold it very long, but the experience of holding and dropping it will let him or her practice for later play.
- Make sure the baby plays on his or her tummy. It is crucial for helping him or her strengthens his or her back, shoulder, arm, and hand muscles.
- Invest in a baby gym with dangling toys. Placing the baby under the arch and encouraging her to bat at the toys is wonderful practice for hand-eye coordination.

4 to 6 Months

This is a crucial period in the development of your baby's fine motor skills. During these months, he or she will start to learn to coordinate his thoughts with his or her hand movements. He or she will not just pick up any old toy; he or she will reach for, grab, and mouth his or her favorites. He or she also

begins to grab his or her own hands and feet and transfer objects from hand to hand.

Helping Hands

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- Play pat-a-cake or 'The Itsy-Bitsy Spider' with the baby to help improve her coordination.
- Press a soft block between the baby's hands for practice holding toys.
- Shift your baby's positions frequently. When an infant learns to play in a new position, such as on her side, her motor skills are challenged in different ways and develop more thoroughly.

7 to 9 Months

The biggest challenge for the baby during these months will be learning how to feed herself or himself.

Helping Hands

- Let the baby make a mess. It's great practice for little fingers.
- When the baby plays, make sure his or her back and shoulders are supported so she can concentrate on making his or her fingers work.
- Let the baby do things by herself. This allows him or her to practice him or her skills and promotes independence.

10 to 12 Months

During this stage, the baby refines what she knows and moves on to harder tasks, such as learning how to operate her fingers independently of one another. The child will also be able to point to objects she wants and use hand signals to let you know that she wants to be held or picked up. She or he will also start to clap along to music and willingly reach for and hold your hand.

Helping Hands

- Tie short pieces of different-colored yarn to each of her fingers so she can see and feel them moving individually. Make sure the yarn is snug but not too tight.
- Poking holes is the best way to help the child learn to use each of his or her fingers independently, so invest in some clay and let her or him poke to her or his heart's content.
- Babies this age understand dozens of words, so ask your child to perform tasks that challenge his or her motor coordination and his or her understanding of cause and effect, such as squeezing a squeaky toy.

Conclusion

Motor development is an important aspect of the holistic development of a child. It impacts in a significant manner on the social and emotional development of the child.

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Check Your Progress

4. What is object manipulation?
5. State the premise of prehension.
6. What are the various ways in which self-care skills can be improved?

6.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Gross motor skills are the skills learned and acquired when a person is still a baby up until early childhood, which is part of an individual's motor development.
2. The basic components of fine motor skills are as follows:
   (a) **Bilateral Integration:** Using two hands together with one hand leading (for example, opening a jar lid with hand while the other hand helps to by stabilising the jar).
   (b) **Crossing Mid-line:** The ability to cross the imaginary line running from a child's nose to pelvis that divides the body into left and right sides.
   (c) **Hand and finger strength:** An ability to exert force against resistance using the hands and fingers that allows the necessary muscle power for controlled movement.
   (d) **Hand eye coordination:** The ability to process information received from the eyes to control, guide and direct the hands in the performance of a task such as handwriting.
3. The gross and fine motor skills can be assessed by using the Peabody Motor scale, most commonly known as a PDHS-2. The child would have to stand up as instructed by the therapist. This is to assess their stationary position, which requires them to take a 30-item test that would assess their locomotion as well.
4. Object manipulation is one of the components of self-care skills. It is the ability to skilfully manipulate tools, including the ability to hold and move pencils and scissors with control, controlled use of everyday tools such as a toothbrush, hairbrush, and cutlery.

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5. Prehension is the ability to grasp objects with the forefinger and thumb working smoothly in opposition.
6. The ways in which self-care skills can be improved are as follows:
   (a) **Visual schedule**: For the steps involved.
   (b) **Reward chart**: For independent completion of tasks (or attempt at, in the early stages).
   (c) **Small steps:** Breaking down self-care skills into smaller steps and supporting the child through each step so that, in time, they can do more for themselves.
   (d) **Routine:** Use the same routine or strategy each time you complete the same task to help them learn it faster.

6.5 SUMMARY

- Gross motor skills are those skills which require whole body movement and which involve the large (core stabilising) muscles of the body to perform everyday functions, such as standing, walking, running, and sitting upright.
- Gross motor skills are important to enable children to perform every day functions, such as walking, running, skipping, as well as playground skills (for example, climbing) and sporting skills (for example, catching, throwing and hitting a ball with a bat).
- Fine motor skills include the usage of the smaller muscles of the limbs. The efficiency of fine motor skills influences the quality of the task outcome as well as the speed of task performance significantly.
- A number of independent skills are required to happen together for appropriate manipulation the object or perform the task.
- Information that the brain receives from our muscles and joints to make us aware of our body position and body movement, so we can accurately control our movements.
- By definition, gross motor skills are the skills learned and acquired when a person is still a baby up until early childhood, which is part of an individual's motor development.
- Fine motor skills pertain to the coordination of muscle movements in the body like the eyes, toes, fingers and so on.
- Fine motor skills can be developed by giving them a paper and crayons; this will enhance the dexterity of their hands.

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- Motor development refers to the enhancement and development of strength, speed and accuracy in the use of limbs and other body muscles.
- Children get 'genes' for all the developments from their parents. It has been seen motor development of a child follows the same pattern as of his parents.
- Nutritious food promotes good motor development. Sensory motor development is dependent upon nutrition that the child gets to a great extent.
- The pattern of development of motor skills is the same for girls and boys, but generally boys are found to be better in all physical activities as compared to girls.
- Prehension is the ability to grasp objects with the forefinger and thumb working smoothly in opposition.
- Handedness means predominant use of one hand over the others. Most babies feel equally at ease with and are able to use both hands, but by the age of two, they will show a definite preference for either the left or the right hand.
- Whether handedness is hereditary or the result of training and social conditioning has been debated for many generations.
- Climbing is a skill which children master incrementally, as they reach developmental milestones for various gross motor skills.
- Climbing typically begins with crawling over objects, progresses to climbing onto objects such as furniture and is fully mastered when children are able to walk down stairs unassisted using alternating feet.
- Climbing tasks such as climbing ladders are complex tasks that require children to have good balance and coordination as well as enough strength to hold them upright while climbing.
- Self-care skills are the daily tasks done by children for participating in life activities. These skills are expected to be developed in the children gradually as they mature.
- Self-care skills facilitate children in development of the ability to plan and sequence task performance, to organise the necessary materials and to develop the refined physical control required to carry out daily tasks.
- Motor development is an important aspect of the holistic development of a child. It impacts in a significant manner on the social and emotional development of the child.

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6.6 KEY WORDS

- **Motor development**: It refers to the enhancement and development of strength, speed and accuracy in the use of limbs and other body muscles.
- **Motor (muscle) planning**: It refers to the ability to move the body with appropriate sequencing and timing to perform bodily movements with refined control.
- **Postural control**: It refers to the ability to stabilize the trunk and neck to enable coordination of other limbs.
- **Proprioception**: It refers to the information that the brain receives from our muscles and joints to make us aware of body position and body movement.

6.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are the ways which indicate improper development of gross motor skills?
2. List the components of fine motor skills.
3. What are the ways in which fine motor skills can be improved?
4. What is Peabody Motor scale?
5. What are the factors which affect motor development?

Long Answer Questions

1. Anlayse the importance of gross motor skills.
2. How is gross motor skill different from fine motor skill? Discuss in detail.
3. Identify the main principles of motor development.
4. Explain the ways in which motor skills and abilities can be developed.
5. Describe the components of self-care skills.

6.8 FURTHER READINGS

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Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 7 COGNITIVE DEVELOPMENT

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Structure

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7.1 Objectives
7.2 Meaning and Definition of Cognition
  7.2.1 Psychological Meaning of Cognition
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  7.3.1 Attention, Inattention and Distraction
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7.0 INTRODUCTION

Cognitive development refers to a field of study in neuroscience and psychology, which deals with a child's development in terms of information processing, conceptual resources, perceptual skill, language learning and other aspects of brain development and cognitive psychology. A lot of research has been done to understand the process of conceptualization in a child.

The first theory of cognitive development was created by the Swiss developmental psychologist, Jean Piaget. He proposed a comprehensive theory about the nature and development of human intelligence. Cognitive psychology refers to the study of mental processes which includes attention, language use, memory, perception, problem solving, creativity, and thinking.

In this unit, the concept of cognitive development and psychology has been discussed in detail. The approaches of cognitive psychology and the theories of cognitive development have also been explained. The unit will also explain the meaning of attention, distraction, sensation, perception and concept map.

7.1 OBJECTIVES

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

- Discuss the meaning of cognition
- Explain the concept of cognitive psychology

- Identify the approaches of cognitive psychology
- Analyse the theories of cognitive development
- Identify the types of attention
- Discuss the meaning of distraction and sensation
- Explain the characteristics of perception
- Interpret the uses of concept map

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7.2 MEANING AND DEFINITION OF COGNITION

Cognition refers to the mental processes involved in gaining knowledge and comprehension. These processes include thinking, knowing, remembering, judging and problem-solving. These are higher-level functions of the brain and encompass language, imagination, perception, and planning.

Cognition is 'the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses'. It encompasses processes such as attention, the formation of knowledge, memory and working memory, judgment and evaluation, reasoning and 'computation', problem solving and decision-making, comprehension and production of language. Cognitive processes use existing knowledge and generate new knowledge.

According to Ulric Gustav Neisser, a German born American psychologist, (1976), 'Cognition is the activity of knowing: the acquisition, organization, and use of knowledge'.

The main focus of a cognitive approach is on the learner's mental structure or schema: a concept combining the learner's previous related knowledge and ideas and the methods, the learner may apply in the situation present that time.

According to psychologists, Glass, Holoyoak and Santa (1979), 'All our mental abilities such as perceiving, remembering and reasoning, are organized into a complex system, the overall functioning of which is termed as cognition. This facet allows us to conclude that sensing, attending, perceiving and analysing are various stages in the pursuit of cognition'.

One of the main significant points of the cognitive approaches is focussed on the processing and storage of information. The current modes of cognitive functioning emphasise on three things:

1. **Knowledge base**: It is a storehouse of information, concepts and associations that are built from growing up, i.e., children into adults.
2. **Cognitive strategies**: It refers to processes by which information becomes a part of the knowledge base and is retrieved from it or is used.

3. **Metacognition**: It deals with individual's awareness of the self as a knower and processor of information.

7.2.1 Psychological Meaning of Cognition

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The word 'cognition' is derived from the Latin word *cognoscere* which means 'to know' or 'to come to know'. Hence, cognition accommodates the activities and processes concerned with the acquisition, storage, retrieval and processing of knowledge. It also includes the processes that help us to perceive, attend, remember, think, categorize reason, decide, and many others processes.

Cognitive psychology is the branch of psychology that deals with cognitive mental processes. It can be defined as the study of processes underlying mental events. It encompasses the branch of psychology which deals with acquisition, transformation, acquisition and communication of language.

The examples of processes under the cognitive psychology are as follows:

- A**ttention**: It refers to the process of focusing on some stimulus.
- **Perception**: It refers to the process of interpretation of sensory information.
- **Pattern Recognition**: It refers to the process of classification stimuli into known categories.
- **Memory**: It refers to the process which stores information for later retrieval.

7.2.2 Approaches to Cognitive Psychology

A number of different approaches have been proposed in order to better understand the field of cognitive psychology emphasizing on different aspects and highlighting distinct features underlying the cognitive processes. These methods provide us with an insight into how the human mind functions by giving us a general idea about the workings of the basic cognitive processes that one engages in.

Broadly, there are four major approaches that try to explain the various cognitive processes by highlighting the different important features:

1. Experimental Cognitive Psychology
2. Computational Cognitive Science
3. Cognitive Neuropsychology
4. Cognitive Neuroscience

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The approaches of Cognitive psychology are discussed as follows:

1. Experimental Cognitive Psychology

- It includes conducting tightly controlled experiments under laboratory conditions on healthy individuals.
- It generally includes experiments which are designed in such a way that they might disrupt the cognitive processes and reveal their workings.
- The findings obtained through such experiments then lead to formulation of the theories, which in turn lead to testable claims.

2. Computational Cognitive Science

- It involves computational modeling through the recreation of some of the aspects of human cognition in the form of some computer program, or formula in order to predict behavior in novel situations.
- It basically involves creating computer based models of human cognitive functions, as well as some work on artificialintelligence.

3. Cognitive Neuropsychology

- It investigates the various cognitive processes by studying the people who have suffered brain damage, and to find out whether damage to a particular brain region would result in a specific cognitive impartment.

4. Cognitive Neuroscience

- It has gained popularity over the past decade or so, and involves brain-imaging devices to study cognitive functions.
- It can help to discover where these processes occur in the brain, and when.
- It involves using brain imaging and brain anatomy to study 'live' cognitive functioning in healthy individuals. As the technology improves, these studies are becoming more influential and potentially useful. Some of the methods used in the cognitive neuroscientific approachinclude:

Research methods in Cognitive Psychology

A number of methods are employed in cognitive psychology in order to get an insight into the workings of higher mental processes. These methods are discussed as follows:

1. Experiments

In an experiment, a researcher manipulates a variable in order to see its effect on another variable. For example, suppose a person wants to know whether background noise affects performances on quantitative problems. One way of

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studying this would be to take a group of people and randomly assign them to two different groups, a *no-noise* group and a *white-noise group*. The first group is asked to solve the problems in a quiet environment and the second group tries to solve the problems whilst being exposed to white noise. In this case, the presence/absence of white noise is referred to as the *independent variable*. Our outcome measure is referred to as the *dependent variable*.

The random assignment of participants and the ability to include variables of interest while excluding many unwanted factors means that the true experiment is a particularly powerful kind of design. However, not all experiments involve the comparison of different groups. For instance, in the earlier example, one could have used a single group of people, but asked them all to take part in the two conditions of the study. The two types of design are referred to as between- subjects and within-subjects, respectively.

2. Psychological Researches

Some researchers investigate the relationship between cognition and the brain's structures and activities. This is psychobiological research. One way of looking at such relationships is to conduct *post mortem* studies, to compare the brains of normal individuals with those who were known to have some kind of cognitive deficit. Also, one can also observe the performance of brain damaged individuals and their cognitive deficits. Researchers can also monitor an individual doing a cognitive task, with the help of various measures such as PET, MRI, or MRI.

3. Case Studies

Case studies are intensive investigations of individuals, usually people of exceptional ability or people with some sort of deficit. These studies may examine archival records, interviews, direct observation, or participant-observations.

4. Naturalistic Observation

Another methodology open to researchers is to observe people in real-life settings, such as at home or at work. Observations may be done with the knowledge and consent of those being watched, or they may be covert, in which case people are not aware that they are being watched. The latter type of observation obviously requires the researcher to give particular thought to ethical considerations.

5. Computer Simulations

Computer simulations aim to imitate aspects of human functioning. A particular cognitive theory may be implemented in a computer program. If the program runs successfully and produces outputs that resemble human responses, then one might conclude that the theory is coherent and plausible.

Cognitive Development

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With the progress of age, the mental faculties of child are developed. The development of mental abilities and capacities which helps an individual to adjust their behaviour to the dynamic environmental conditions is referred to as 'cognitive development'.

It takes into consideration various mental abilities and capacities, the cognitive development process are continuous process with different rates at different stages of life.

During birth, the development of sense organs is not complete. After the development of sense organs, sensations are developed which leads to enhancement of perception.

Concept development is another cognitive process which is due to the perceptual experiences involving both discrimination and generalization. Language development such as speech and written communication are the cognitive processes. Memory is another aspect of cognitive development.

Piaget's Theory of Cognitive Development

Piaget proposed that children move through four stages. Periods of time are consistent in age and are in a developmental sequence. The range of the ages is variable. Some children are in *transition* from one stage to the next.

1. Sensori Motor Stage (0-2 Years)

- Characterized by infants using senses and motor skills to explore world.
- Begins with reflexes and ends with a complex combination of sensory and motor skill combinations.
- Major cognitive developmental milestones include *object permanence* and an understanding of cause-effect relationships.
- Symbolic thought, the ability to represent and think about external objects and events, emerges toward the end of second year.

2. Pre Operational Stage

- Characterized by the rapid development of language which allows for more social interaction.
- Egocentrism is the inability to view situations from another's perspective.
- Lack of conservation is the inability to realize that if nothing is added or taken away, the amount stays the same regardless of alterations in shape or appearance.
- Lack of logic is the inference of a cause-effect relationship simply because two events occur close together in time and space.

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3. Concrete Operational Stage

- Children begin to think more logically and demonstrate deductive reasoning.
- Children are able to learn classification, seriation, and are able to reverse operations which allows for the teaching of mathematics.
- However, children cannot apply newfound logic to non-concrete items (abstract concepts).

4. Formal Operational Stage

- Children are now able to reason logically about abstract and hypothetical ideas.
- Can formulate and test multiple hypotheses.
- Limitations include excessive idealism.
- May reflect formal operational egocentrism, the inability to separate one's own logical abstractions from the perspectives of others and from practical considerations.

Importance of Understanding Cognitive Development for Teachers

It can be stated that the teacher is visualized to be a facilitator of children's learning. The main role of the teacher is understood as being someone who enables children to construct knowledge. However, teachers are not seen merely as disseminators of content knowledge. They are seen as being active, critical, and constructive in all processes related to education, including development of curriculum, text-book and assessment. Therefore, teachers ideally would engage in the following activities:

- Observing and engaging with children.
- Communicating with and relating to children.
- Understanding their socio-cultural contexts, their paces, styles of learning, and their interests.
- Organizing teaching-learning environment which is joyful and enriching.
- Developing in themselves the capacity for self-analysis, self-evaluation, adaptability, flexibility, creativity and innovation.
- Engage with subject content, examine disciplinary knowledge and social realities, and relate subject matter with the social milieu of learners.
- Engage in interactions with the immediate community.

Conclusion

The knowledge of the trend of cognitive development and the resulting changes in the various types of mental abilities proves useful for the teachers to plan and organize the teaching learning environment in order to ensure the maximum growth and development of the mental abilities of the students.

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Check Your Progress

1. What is the main focus of a cognitive approach?
2. State the premise of cognitive psychology.
3. What is the aim of computer simulations?

7.3 COGNITIVE PROCESS

Cognitive psychology is a sub-discipline of psychology which explores internal mental processes. It is the study of how people perceive, remember, think, speak and solve problems.

Cognitive psychology is radically different from other psychological approaches in two key ways.

1. It accepts the use of the scientific method and generally rejects introspection as a valid method of investigation, unlike symbol-driven approaches such as Freudian psychology.
2. It explicitly acknowledges the existence of internal mental states (such as belief, desire and motivation).

The school of thought arising from this approach is known as cognitivism.

7.3.1 Attention, Inattention and Distraction

Attention is the basic need for all successful teaching. Attention is the primary precondition of all types of our mental activity—cognitive (knowing), affective (feeling) and conative (acting). Attention is the heart of conscious process. It is the concentration of consciousness upon one object or idea rather than the other. Attention may be compared to the action of a photographic camera. Just as the camera is focused on a particular object or an individual or group leaving out others, in the same way attention is concentrated on a particular object. Other objects are left in the background in the unconscious or subconscious.

Every single moment of the child is attracted by a large number of stimuli of the environment. His or her mind is not able to concentrate on all these at the same time. Some objects occupy the centre of consciousness.

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They are within the field of attention. Other objects which do not receive his or her attention are included in the field of inattention. It is on this account that attention has also been described as a selective process of the mind.

While one is conscious of every object we attend to, we do not attend to every object we are conscious of. Consciousness, therefore, is a wider field and includes attention. An individual attends to a part of the field of consciousness; the rest is not attended to. While one is looking at a picture in the classroom, one is conscious of the large number of objects in the classroom. But the picture is at the focus' of our consciousness. Picture is the spotlight of attention and other objects in the room—chairs and desks remain at the margin of consciousness. Thus, there are two fields: one of attention and the other of inattention.

Attention in an attitude of mind. It denotes 'preparedness' or 'readiness' to do something.

According to a British idealist philosopher, F H Bradley, attention is a complex of sensation and ideas.

Types of Attention

Attention has been classified in a number of ways.

1. **Involuntary or non-volitional attention:** It is spontaneous. It does not involve any effort on part of the individual. The object automatically calls for attention, for example, attending to a piece of music in a neighbouring house while reading a book, sudden noise such as pistol shot, accident and so on.
2. **Voluntary or volitional attention:** In voluntary attention, there is a conscious effort on our part. When a child tries to understand a difficult passage with mental strain, his/her attention is voluntary.
3. **Habitual attention:** During the course of experience with several things, you are conditioned to attend to certain stimuli. Here, external conditions are not involved. A mother always hears the cries of the baby whereas others may ignore it.

Educational Implications of Attention

Attention is a necessary condition for any mental task in the classroom. In fact, it is the 'hub' of the entire teaching-learning process. Attention provides a mental set or state of preparedness or state of alertness for a task to the learner as well as to the teacher.

Teacher has to do his/her best to make the students learn how attention could be secured. At the same time, he/she has to create such conditions in the classroom that enable him to make students attentive to learning.

Attention increases efficiency. It is helpful in remembering. It arouses interest. It motivates the child to study.

Distraction

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Distraction is a stimulus that attracts attention away from the things to which we want to attend. A student may be attending the class but a procession on the street is a distraction and takes away his or her attention. The loud noise of the fan is a distraction.

Causes of Distraction

The stimulus causing distraction has certain factors of advantage over the object which is the focus of attention. The intensity of those factors is higher than the object of our attention. In the classroom, the most important causes of distraction are: (i) noise, (ii) unfavourable temperature, (iii) improper light arrangements, (iv) uncomfortable seating arrangements, (v) unimaginative methods of teaching, (vi) bad health, (vii) anxieties and worries.

Overcoming Distraction

The following are the ways to overcome distraction:

- Creation of favourable environment.
- Removal of distracting elements before the start of the lesson.
- Speaking aloud.
- Using dynamic methods including aids.

7.3.2 Sensation

Sensations can be defined as the passive process of bringing information from the outside world into the body and the brain. The process is passive in the sense that one does not have to be consciously engaged in a 'sensing' process. If a person is unable to organize or interpret the sensations then everything around will be jumbled.

Sense organs collect the information from the stimulus around and send it to brain; the brain processes this information and tries to give it some meaning. There is not much difference between sensation and perception.

The process of detecting a stimulus such as light waves (vision), sound waves (hearing), chemical molecules (smell and taste), heat or pressure (touch) is called sensation. It is the first response of the organism to the stimuli. Different types of sensations have different traits. For example, motor, organic and spatial sensations have different characteristics, which actually distinguish, them from each other. These different sensations have got different degrees of strength and intensity. The intensity depends upon two factors such as the objective strength of the stimulus and the mental state of the individual.

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Human beings receive sensation from the eyes, ears, nose, tongue and the skin, which are our five sense organs. The sensation can be divided into three types:

1. **Organic sensations:** It refers to those sensations which are caused by internal organs. These sensations are not because of an external stimulation. Hunger is considered to be an organic sensation, which occurs because of the contradiction of walls of the stomach.
2. **Special sensations**: It refers to those sensations which are caused by the specific sense organs like eye, ear, nose, tongue and skin. These special sensations can be differentiated from each other. The source of the special sensations is external. They give information about the outside environment.
3. **Visual sensations:** It refers to those sensations which are only activated or stimulated because of light waves. These types of sensations are experienced through the sense organ of eye. The visual sensations can further be classified into two types, namely: sensation of brightness and sensation of colour. Colour sensation means identifying and differentiating four types of basic colours.

7.3.3 Perception

Perception is a process by which organisms select, organize and interpret the stimulus (people, places, objects and situations) in order to give meaning to the world around them. When you see a flower, sensation of colour, smell, touch is aroused, meaning is given to this, and the object is perceived as a flower.

Perception is a complex process because it is a combination of a number of sub-processes, which are listed as follows:

- **Receptor process:** The first process involved in the process of reception is the receptor process. For example, the rose stimulates three receptor cells and three different receptor processes of eye, nose and touch.
- **Unification process:** For example to perceive rose, unification of all the three sensations are required.
- **Symbolic process:** Every object reminds of something, and so a symbol is attached to it. Every time the rose is perceived, the symbol gets associated with it.
- **Affective process:** Every object represents some emotions, pleasant or unpleasant. Thus, it is concluded that perception is a complex process and involves sensations and past experience.

Characteristics of Perception

The main characteristics of perception are as follows:

- **Unity and continuity:** If the sensations are scattered, then perception is not possible because in that case it will lack meaning.
- **Attention:** Perception means giving meaning to the sensations. Closeness of the sense organs and the objects may not result in perception because no attention was given to it.
- **Persistency with varied efforts:** For understanding complex things, the perceiver has to constantly change his or her efforts.
- **Adapting to varying circumstances:** In some cases of perception, sensations keep on changing. For example, a football player has to keep track of the opponent and also adapt according to the strategies of the opponent.
- **Learning by experience:** A person learns to perceive unfamiliar or new things by learning. A person who has never seen a plane in the sky cannot perceive it.
- **Recollection:** Recollection of past experience and connecting with present sensations result in perception.

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Imagery

Imagery is derived from the word image. According to psychologist, Drever, 'Image is our apprehension of an object or objects in the absence of object or objects themselves, which originally determined our sense perception.' When we form images, the process is called imagination.

7.3.4 Concept Maps

A concept map is a diagram showing relationships among concepts. They are graphical tools for organizing and representing knowledge.

Concepts, usually represented as boxes or circles, are connected with labelled arrows in a downward-branching hierarchical structure. The relationship between concepts can be articulated in linking phrases such as 'gives rise to', 'results in', 'is required by,' or 'contributes to'.

The technique for visualizing these relationships among different concepts is called 'concept mapping'. An industry standard that implements formal rules for designing at least a subset of such diagrams is the Unified Modeling Language (UML).

A concept map is a way of representing relationships among ideas, images, or words, in the same way as a sentence diagram represents the grammar of a sentence, a road map represents the locations of highways and towns and a circuit diagram represents the workings of an electrical

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appliance. In a concept map, each word or phrase is connected to another and linked back to the original idea, word or phrase. Concept maps are a way to develop logical thinking and study skills by revealing connections and helping students see how individual ideas form a larger whole.

Concept maps were developed to enhance meaningful learning in the sciences. A well-made concept map grows within a *context frame* defined by an explicit 'focus question', while a mind map often has only branches radiating out from a central picture. There is research evidence that knowledge is stored in the brain in the form of productions (situation-response conditionals) that act on declarative memory content which is also referred to as chunks or propositions. The concept maps are constructed to reflect organization of the declarative memory system; they facilitate sense-making and meaningful learning on the part of individuals who make concept maps and those who use them.

Concept Map and its Uses

Concept maps are used to stimulate the generation of ideas and are believed to aid creativity. For example, concept mapping is sometimes used for brainstorming. Although they are often personalized and idiosyncratic, they can be used to communicate complex ideas.

Formalized concept maps are used in software design, where a common usage is Unified Modeling Language diagramming amongst similar conventions and development methodologies. Concept mapping can also be seen as the first step in ontology building, and can also be used flexibly to represent formal argument.

Check Your Progress

4. What are the main characteristics of perception?
5. How is cognitive psychology different from other psychological approaches?
6. What are sensations?

7.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The main focus of a cognitive approach is on the learner's mental structure or schema: a concept combining the learner's previous related knowledge and ideas and the methods, the learner may apply in the situation present that time.

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2. Cognitive psychology is the branch of psychology that deals with cognitive mental processes. It can be defined as the study of processes underlying mental events.
3. Computer simulations aim to imitate aspects of human functioning. A particular cognitive theory may be implemented in a computer program. If the program runs successfully and produces outputs that resemble human responses, then one might conclude that the theory is coherent and plausible.
4. The main characteristics of perception are as follows:
   (a) Unity and continuity
   (b) Attention
   (c) Persistency with varied efforts
   (d) Adapting to varying circumstances
   (e) Learning by experience
   (f) Recollection
5. Cognitive psychology is different from other psychological approaches in the following ways:
   (a) It accepts the use of the scientific method and generally rejects introspection as a valid method of investigation, unlike symbol-driven approaches such as Freudian psychology.
   (b) It explicitly acknowledges the existence of internal mental states (such as belief, desire and motivation).
6. Sensations can be defined as the passive process of bringing information from the outside world into the body and the brain.

7.5 SUMMARY

- Cognition refers to the mental processes involved in gaining knowledge and comprehension. These processes include thinking, knowing, remembering, judging and problem-solving.
- Cognition is 'the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses'.
- The main focus of a cognitive approach is on the learner's mental structure or schema: a concept combining the learner's previous related knowledge and ideas and the methods, the learner may apply in the situation present that time.
- One of the main significant points of the cognitive approaches is focussed on the processing and storage of information.

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- Cognition accommodates the activities and processes concerned with the acquisition, storage, retrieval and processing of knowledge.
- A number of different approaches have been proposed in order to better understand the field of cognitive psychology emphasizing on different aspects and highlighting distinct features underlying the cognitive processes.
- Case studies are intensive investigations of individuals, usually people of exceptional ability or people with some sort of deficit.
- Computer simulations aim to imitate aspects of human functioning. A particular cognitive theory may be implemented in a computer program.
- The development of mental abilities and capacities which helps an individual to adjust their behaviour to the dynamic environmental conditions is referred to as 'cognitive development'.
- Concept development is another cognitive process which is due to the perceptual experiences involving both discrimination and generalization.
- It can be stated that the teacher is visualized to be a facilitator of children's learning. The main role of the teacher is understood as being someone who enables children to construct knowledge.
- Cognitive psychology is a sub-discipline of psychology which explores internal mental processes. It is the study of how people perceive, remember, think, speak and solve problems.
- Attention is the basic need for all successful teaching. Attention is the primary precondition of all types of our mental activity—cognitive (knowing), affective (feeling) and conative (acting).
- Attention is a necessary condition for any mental task in the classroom. In fact, it is the 'hub' of the entire teaching-learning process.
- Sensations can be defined as the passive process of bringing information from the outside world into the body and the brain.
- Perception is a process by which organisms select, organize and interpret the stimulus (people, places, objects and situations) in order to give meaning to the world around them.
- A concept map is a diagram showing relationships among concepts. They are graphical tools for organizing and representing knowledge.
- A concept map is a way of representing relationships among ideas, images, or words, in the same way as a sentence diagram represents the grammar of a sentence, a road map represents the locations of highways and towns and a circuit diagram represents the workings of an electrical appliance.

- Concept maps are used to stimulate the generation of ideas and are believed to aid creativity. For example, concept mapping is sometimes used for brainstorming.
- Concept mapping can also be seen as the first step in ontology building, and can also be used flexibly to represent formal argument.

7.6 KEY WORDS

- **Cognitive psychology**: It refers to a sub-discipline of psychology which explores internal mental processes. It is the study of how people perceive, remember, think, speak and solve problems.
- **Concept map**: It refers to a diagram showing relationships among concepts. They are graphical tools for organizing and representing knowledge.
- **Perception**: It refers to a process by which organisms select, organize and interpret the stimulus (people, places, objects and situations) in order to give meaning to the world around them.
- **Visual sensations:** It refers to those sensations which are only activated or stimulated because of light waves.

7.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What is cognition?
2. Why is attention an important part of consciousness process?
3. What are the various research methods of cognitive psychology?
4. Write a short note on Piaget's theory of cognitive development.
5. Why is it important for teachers to understand cognitive development?
6. State the main causes of distraction.
7. Why is perception a complex process?

Long Answer Questions

1. Discuss the modes of cognitive functioning.
2. Identify the main types of sensation.
3. Explain the various approaches of cognitive psychology.
4. Anlayse the types of attention.
5. Discuss the uses of concept map.

7.8 FURTHER READINGS

NOTES

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 8 PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

Structure

8.0 Introduction
8.1 Objectives
8.2 Piaget's Theory with Special Reference to Development up to the Period of Early Childhood
  8.2.1 Piaget's Stages of Intellectual Development
  8.2.2 Piaget's Views on the Various Aspects of Learning
  8.2.3 General Educational Implications of Piaget's Cognitive Theory of Development
8.3 Application of Jean Piaget's Theory to Early Childhood
  8.3.1 Mental or Intellectual Development
  8.3.2 Achievement in Stages of Intellectual Development
8.4 Answers to Check Your Progress Questions
8.5 Summary
8.6 Key Words
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8.0 INTRODUCTION

Jean Piaget became the first psychologist to conduct a systematic study of cognitive development. His contributions include a stage theory of child cognitive development, detailed observational studies of cognition in children, and a series of simple but ingenious tests to reveal different cognitive abilities.

Piaget's (1936) theory of cognitive development describes the construction of the mental model of the world by the child. He diverged from the idea that intelligence was a fixed trait, and defined cognitive development as a process which happens due to biological maturation and interaction with the environment. In this process, children construct an understanding of the world around them followed by experiencing of discrepancies between what they already know and what they discover in their environment.

The main purpose of Piaget was the construction of fundamental concepts of number, time, quantity, causality, justice and so on emerged. According to Piaget, children are born with a very basic mental structure (genetically inherited and evolved) on which all subsequent learning and knowledge are based.

In this unit, the cognitive development theory with special significance on early childhood has been described. The main aspects of learning and

the applications of Piaget's theory have been explained. The unit will also highlight the stages, aspects and main areas of intellectual development.

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8.1 OBJECTIVES

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

- Discuss Jean Piaget's cognitive development theory of early childhood
- Identify the main stages of intellectual development
- Explain the aspects of learning
- Anlayse the applications of Jean Piaget's theory of development
- Identify the main areas of mental development
- Describe the factors which affect intellectual development

8.2 PIAGET'S THEORY WITH SPECIAL REFERENCE TO DEVELOPMENT UP TO THE PERIOD OF EARLY CHILDHOOD

Piaget introduced four concepts in the building of his theory. They are discussed in the following section.

1. **Schemas (Cognitive structures):** Piaget called 'schemas' as cognitive structures or the patterns of behaviour that children and adults use in dealing with objects in their environment. These patterns can be simple as well as complex. As the development proceeds, each pattern enlarges and changes. It is coordinated with other patterns to form more complex patterns. The infant sucks the breast of his or her mother, he or she looks at the objects of his environment, listens to different voices in his or her environment and finally he or she tries to comprehend, conceptualize the articles, animals, space and many other behaviour patterns or structures.
2. **Assimilation**: Assimilation implies incorporation of something from the environment. New ideas, concepts and stimuli are taken in and incorporated into one's existing set of schema. A scheme is an organized pattern of behaviour which the child develops when he or she is engaged in any activity. For example, when a child is engaged in sucking, there is a certain pattern of movements of the cheeks, lips and hands. When a child is confronted with a new object, he or she will try to understand the new object by applying his or her old schema to it. He or she grasps and adapts him or her to a new object by assimilating it. His or her old schema does not change in the process.

3. **Accommodation:** Accommodation involves modification or change of some elements of an old schema or learning new schema which is more appropriate for the new object. A baby who has already got a schema of sucking mother's breast accommodates to the object placed in the mouth — finger, nipple, pencil, a toy—depending on its shape, form and the size. The baby develops a new schema or a modified schema. This is called accommodation. Thus, a baby assimilates when he or she understands and perceives the new in the light of his or her old perceptions. A baby forms a new schema and modifies orchanges his old perception to suit the new. This implies adjusting or accommodating. In this way, a baby forms new structures or new schemes, and consequently develops cognitivity.
4. **Equilibration:** The structures or the schemes change from one stage to another by the process of equilibration—maintaining balance between the child and his or her changing environment. According to Piaget, when by the existing scheme, the new situation is not fully handled, then a state of disequilibrium or an imbalance between what is understood and what is encountered is created. In such a case, the individual tries to reduce such imbalances. This is done by him or her by focusing his or her attention on the stimuli that has caused the disequilibrium and by developing new schemas or adapting old ones until equilibrium is restored. This process of restoring balance is called equilibration. Piaget believes that learning depends on this process.

8.2.1 Piaget's Stages of Intellectual Development

Piaget proposed four stages of cognitive or intellectual development which reflect the increasing sophistication of children's thought. These stages are as follows:

1. Sensorimotor stage (birth to 2 years of age)
2. Pre-operational stage (from 2 years to 7 years)
3. Concrete operational stage (from 7years to age 11 years)
4. Formal operational stage (age 11+ - adolescence and adulthood)

Each child goes through these stages of cognitive development in the same sequence which is determined by biological maturation and interaction with the environment. There is a compulsion that no stage can be missed out although, there are individual differences in the rate at which children progress through stages, and some individuals may never attain the later stages. Let us discuss these stages in detail in the following section.

1. **Sensorimotor Stage (Birth-2 years):** This stage is between birth and 2 years of age. In this stage, a child obtains primary experiences through their senses such as touching, tasting, listening, seeing, and sensing. As they progress in age they are able to do more complex physical

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actions like crawling, moving body, babbling. They gradually become capable of engaging in goal directed activities by the end of this stage. They are able to chase somebody, they are able to put take out their toys from a box and put them back. The developments that take place in this stage include:

(a) Co-ordinating reflexes

(b) Greater control over body movements

(c) Co-ordinating simple motor actions

Another important development that takes place during this stage is object permanence. In the initial years of this phase, the infant's thinking is not developed enough to understand that objects continue to exist even if he cannot see or sense them. Language also starts developing during this age. From the first babbling to the first signs of language, appear but they more significantly develop in the next stage. It requires the ability to form a mental representation (i.e., a schema) of the object.

2. **Preoperational Stage (2-7 years):** The span of this stage is primarily from 2 years to 7 years. During this stage, young children think in symbolic terms. This is the ability to make one thing - a word or an object - stand for something other than itself. The thought process is still in ego centric terms. The mental processes described in sensorimotor stage are clearly developed by this stage. The development proceeds on the basis of these processes. A child cannot mentally imagine doing an action or reversing it which is also known as operations or operational thinking. Since, this second stage comes before development of such thinking, it is known as preoperational. First step in this direction is development of a language system. For example, they can see the picture of an apple and identify it. They become capable of symbolic actions like pretending to drink tea from an empty cup.
3. **Concrete Operational Stage (7-11 years):** This stage spans from seven years to eleven years. It is considered as the major milestone in the cognitive development because it marks the beginning of logical or operational thought. The learner is oriented towards practicality and applies logic and problem solving thinking in concrete problems. The learner is able to sequence the object on the basis of sequence of their attributes. That is, middle school years. In this phase children become capable of decentering and reversing actions mentally. In short, the child at this age overcomes most of the limitations of the previous stage. That is, the child gradually develops ability to understand others perspective (moving ahead from egocentrism). They initiate movement from perceptual or observable towards more symbol based logical thinking, but the thinking is still based on the material world.

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The ability of reversibility in thinking opens new avenues for learning. Therefore, the system of logic fairly develops to become much more adult-like.

4. **Formal Operational Stage (11 years and over):** The formal operational stage begins at approximately age eleven and lasts into adulthood. During this time, people develop the ability to think about abstract concepts, and logically test hypotheses. The mental faculties of the learner are matured and there is a sequence to the thought process. There is an increase in the problem solving capability of the learners. The child is able to comprehend the meaning of symbolic words, analogies and is able to think in abstract terms. They gradually become capable of abstract thinking which means that they can think and engage with symbols (like numbers). Such thinking demands ability for hypothetical (assumptions based), and deductive reasoning

8.2.2 Piaget's Views on the Various Aspects of Learning

According to Piaget, the various aspects of learning are as follows:

1. **Meaning of learning:** Learning includes the wide range of activities. Rigid distinctions such as classroom for instruction, laboratory for practicals, recess for amusement, and mathematics for developing computational ability and athletics for strengthening the body muscles are unnecessary. Piaget's approachhelps to tie together what have been treated as separate subjects.
2. **Role of learner's actions:** Action stresses the role of active exploration. A child is active when he or she stares at objects. A child is active when he or she stares at an organism. A child is active when he or she studies his or her body parts. A child is active when he or she lifts something. A child is active when he or she carries things. A child is active when he or she arranges things. Children are usually active for mostof their time. There is no doubt that some of these activities may be rather aimless or unnecessary. However, most of these activities are purposeful.
3. **Role of practice:** An important part of Piagetian model is repetition of an act by a child. The role of practice varies with development. Concepts are the products of a long history of action. A child may take three or more days to complete a puzzle. Each day, he or she appears to go through the same sequence. A child's actions upon the environment are repeated again and again with slight modifications each time. Piaget depicts the child as somewhat slower and methodical and systematic in acquisition of new ideas.
4. **Motivation:** According to Piaget, a learner desires to reduce his or her internal conflicts by keeping his or her thoughts harmonious and

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in equilibrium. It is only through playing, imitating, exploring and questioning that a child gradually comes to distinguish the achievable from non-achievable, and logical from the illogical. To Piaget, the progress towards this end is inherent, a property of cognitive style as are eating, drinking and breathing in the physiological field.

5. **Memory:** Memory is a symbolic representation of how the child has schematized what he or she sees. Experiments conducted by Piaget reveal that after six months, 61 per cent of the children from 4-8 years of age regressed in their memory ability, if tested by recall or evocation.

   A reconstruction test involving the child with some material showedregression in 4-5 years old but 48 per cent progression among 6-7 years old. Piaget holds that recognition is perceptual and reconstruction is internalized imitation. Each experiment reveals that the pattern of accuracy, improvement and regression (Gradual loss of memory) is determined by initial conceptual understanding and is altered by new understandings.

6. **Interest:** According to Piaget, the interest of the child at any given movement depends upon the system of ideas he or she has acquired plus his or her affective perception. A child tends to fulfil his or her interests in the direction of greater equilibrium. According to Piaget, Equilibrium is development and the ability to think in a logical and natural manner.

8.2.3 General Educational Implications of Piaget's Cognitive Theory of Development

The educational implication of Piaget's cognitive development theory was applied by educationists in the field of teaching and learning.

Within the classroom, learning should be student-centered and accomplished through active discovery learning. The role of the teacher is to facilitate learning, rather than direct tuition. Therefore, teachers should encourage the following within the classroom:

- Focus on the process of learning, rather than the end product of it.
- Using active methods that require rediscovering or reconstructing 'truth'.
- Using collaborative, as well as individual activities (so children can learn from each other).
- Devising situations that present useful problems, and create disequilibrium in the child.
- Evaluate the level of the child's development so suitable tasks can be set.

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- Recognition of the crucial role of self involvement in learning activities by the learners.
- Demphasis on practices aimed at making children think like adults.
- Acceptance of individual differences in developmental process.

Some of the implications are as follows:

- It provides a broad development perspective to the educator for building a curriculum for the children.
- The description of developmental stages and qualitative aspects of intellectual growth is useful in providing suitable educational practices.
- The cognitive theory states that the child has to be actively involved in the teaching-learning process for his or her intellectual growth.
- Piaget-based curriculum requires that children should not skip any stage.
- The pre-school child is at the pre-operational level. The educational program at this stage should provide concrete operations.
- An educational program should enable the child to integrate the information.
- A child should be helped to develop internal consistency of the system.
- Most of the activities of the Piaget type require simple equipment and material.
- Drilling in skills is to be avoided.
- Teaching learning situation should be geared to a point where the child is neither too familiar nor too unfamiliar with the objects and ideas.
- Variety of cognitive activities such as storytelling, rhymes and so on are included in the program in a systematic manner. There is a deliberate attention of developing cognitive growth.
- A child's development is retarded if he is not allowed a fairly wide sensoryand motor experience in his early years.
- Real events and concrete objects play an important role in learning.
- In science and mathematics, learning from physical environment is more important than what is learnt from people, books or television.
- A teacher should arouse curiosity of the child through planned activities.

- Children like to find out by themselves by their own spontaneous activity.
- Children learn speedily if one provides concrete material to them.

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Criticism of Piaget's Theory of Development

Several psychologists do not agree with Piaget's theory of cognitive development. According to Gagne (1968), the stages explained by Piaget are not necessarily the inevitable result of an inborn time-table. Rather, it is a consequence of children having learned sets of rules that are progressively more complex and these rules are taught by their physical and social environment. Gagne thinks that Piaget was indifferent to the role of learning in developmental changes.

Some of the other psychologists also believe that infants are not born with elementary mental structures which are the starting points for their attempts to deal with their environment.

His views are not new to educational thought. What is new is that they have been stated in the context of the classroom situations. Instruction in the classroom would serve as the function of setting into motion, the processes of assimilation and accommodation for a particular area of exploration.

Check Your Progress

1. What is a scheme?
2. How does the scheme change from one stage to another?
3. Why is concrete operational stage considered as the most important stage in cognitive development?

8.3 APPLICATION OF JEAN PIAGET'S THEORY TO EARLY CHILDHOOD

The application of Jean Piaget's theory of cognitive development has been discussed in the following section.

Sensorimotor Stage (0-2 Years)

- Use of symbols
- Development of Language
- Development of memory and imagination
- Formation of stable concepts
- Beginning of development of mental reasoning

Pre-Operational Stage (2-4 years)

- Development of symbolic reasoning
- Weakening of Egocentrism
- Construction of Magical beliefs
- Development of intuitive thought
- Use of primitive reasoning skills and wondering.

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8.3.1 Mental or Intellectual Development

Mental development or intellectual development is the development of the mental abilities and capacities which help an individual to adjust his or her behaviour to the ever changing environmental conditions or to enable him or her to accomplish a task that needs complex cognitive abilities. According to psychologist, Bruner (1964), 'Intellectual development is the capacity to deal with several choices at the same time.'

Various Aspects/Areas of Mental Development

The following are the main areas or aspects of mental development:

Intelligence and mental development: In the first place, mental development implies increase in intelligence. The results of intelligence tests show that mental or intellectual growth is rapid in infancy, moderate in childhood and slow in youth.

Sensation and perception: Both sensation and perception are considered important aspects of mental development. Senses are the elementary impressions gathered by sense organs. Impressions take the form of perception when they are interpreted and some definite meanings are attached to them.

Through experience, child's sensations become perceptions and he or she is able to give meaning to it. Child's sensory equipment becomes mature at the age of five. He or she shows a great interest in seeing, hearing, touching, smelling and tasting. However, a child's sensations do not automatically assume meaning. During his or her early childhood, a child is more likely to misrepresent things and objects becauseof lack of experience. For example, when viewed from a distance, a train may appear to a child as a toy train. But gradually a child's perceptions become more and more accurate through the right kinds of experiences. By the time a child enters school, he or she has gained enough experience.

Yet, he or she needs assistance and guidance to improve his or her ability to perceive by having first hand experiences and observations of objects, persons and situations around him or her. Gradually he or she develops a proper perception of space, time, form, movement and distance. Perception patterns become more organized and refined when an individual reaches his or her adolescence. At adolescence, perception patterns tend to become more

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definite, detailed and rich. Now they need not be associated necessarily with objects. They are beginning to be influenced by an individual's beliefs, ideals, and opinions and so on.

Concept formation: Another important aspect of the child's mental development is the acquisition of concept. A concept is the generalized meaning that is attached to an object or idea. It is the result of one's perceptual experiences. It involves both discrimination and generalization.

Discrimination begins sometimes after the child tries to generalize his or her perceptual experiences. Thus, he or she begins to acquire concepts. Experience is an important factor in concept formation. In early childhood, a child tries to develop various concepts from the concrete experiences in the form of actual objects.

Normally, concept formation proceeds from concrete to abstract, from vague to clear and from inexact to exact, depending on the type of experiences a child receives. The child has a very poor concept of time. As stated by psychologists, Crow and Crow, 'Time as such means little to the young child. He or she cannot distinguish among 'today', 'tomorrow', and 'next week' except as they represent words rather than actual duration of time.'

In later years, various experiences provided by reading, lecturing and motives help in concept formation. Generally, concepts may be broadened, and developed. They may even take a new shape. Wrong concepts can be altogether abandoned.Gradually as a result of learning and maturation, child's concepts becomes clear, definite and specific.

Development of language: The development of language contributes to the mental growth and development of the child. Important aspects of language development are speech, vocabulary and length of responses.

Development of memory: Memory is also an important element of mental development. There is little memory at birth but it gradually increases with maturation and experience. According to psychologists, Hurlock and Schwartz (1932), 'Memory of animpressionistic kind appears in the first half of the year and instances of the true remembrance appear by the end of first year. During the first year, memory is only aroused by sensory stimuli. With the learning of speech, the child is able to remember ideationally by the end of the second year. During the first and second years, the memory is stronger for persons and objects than for situation. In pre-childhood from 3 to 6 years, situations become significant factors in the child memory. The emotional quality of the impressions also influences memory. By age of 3, the child can recount the story heard a few days ago and he can also give information about past experiences.'

A child has a good memory in the earlier stages but this memory is generally a rote memory. His or her memorization is without reasoning. He or she seldom uses logic and insight in memorization. A child can cram and

reproduce the matter easily. The memory tends to function more logically during later childhood and adolescence.A selection process of remembering and forgetting begins to operate. After that memory tends to decrease. Memory depends upon person to person. It is generally affected by health and situation of the child. The stimuli which are associated with a kind of memory influence significantly, its remembrance or forgetting.

Creativity: It may be stressed that creativity is the most single ability which is at the root of human progress. Like many other activities, it can be developed at a young age. In a general sense, creativity is the ability to think in novel ways whichresult in some new and original solution.

Problem solving: All thinking and reasoning involve meeting difficulties, facing complex situations and finding out solutions. An individual is beset with all these since childhood. Thinking and reasoning powers are used in problem solving and these begin to grow as early as two and a half or three years of age. Gradually the ability to reason grows.

Stages of Mental Development

The various stages of mental development are given as follows:

1. **Period of infancy**: **The beginning of awareness**: In the beginning mental activity consists of awareness of oneself. Later on, this awareness extends to the environment. The nervous system begins to grow during the prenatalperiod. As the nervous system keeps on growing before and after birth, the process of mental development also goes on accordingly.
2. **Mental development before the age of three**: During these years, the process of mental development is much faster. Important characteristics of this stage are:
   - Curiosity
   - Rote memory
   - Creativity
   - Time concept not yet developed
   - Very little development of powers of observation, perception and concentration
3. **Period of pre-school age**: During the ages of two and a half or three to six, the mental abilities of the child develop very rapidly. His or her perceptual powers increase and his or her curiosity are aroused to a great extent.
4. **Childhood and before adolescence**: During this period, the sensory powers increase rapidly and the child becomes more accurate in his or her observations. From a make-believe type of imagination, he or she now starts thinking on creativelines. During this period, the likes

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and dislikes of the child, his or her interests, thoughts and plans begin to shape themselves. His or her power of deductive and inductive reasoning increases and he or she is able to generalize from the data given to him or her. He or she develops the concepts of length, time and distance and tends to express himself or her in various ways.

5. **Mental development during adolescence**: The most crucial and significant period of an individual's life. It is the period of rapid changes in the individual'sphysical, mental, moral and social outlook.
6. **Mental development during early adulthood**: The most important mental abilities needed for learning and for adjustment to new situations, such as recall, reasoning and creative thinking reach their peak during the twenties and men begin a slow and gradual decline.
7. **Mental development and middle ages**: Studies conducted by Termanand Oden (1959) on a group of individuals followed from pre-school years to middle life have shown that mental decline does not set in during middle ages among those with high intellectual abilities.
8. **Mental development during old age**: Old people take more time to integrate their responses. They tend to lack the capacity for or interest in creative thinking. Old people tend to have poor recent memories but better remote memories. There is slight deterioration in vocabulary. The mental rigidity that sometimes sets in during middle age often becomes more pronounced as the person grows older.
9. **Cessation of mental growth**: Psychologists have tried to give various ages ranging from thirteen to the early twenties or even much later as the age after which there is no further mental growth. Psychologist Sorenson (1945) has tried to analyse the age of cessation of mental growth. He writes that it is probably safe to conclude that a person reaches his or her maximum mental level at about the age of twenty or perhaps a little before or a little after twenty.

It is true that on the average there is only a little mental growth during the late teens, nevertheless, this small amount may be very important.

Concluding Observations

It may be remembered that all the changes in mental development do not occur all of a sudden nor do they strictly conform to a specific stage. The changes that are mentioned here are no doubt signs of increasing maturitybut no distinct stages in mental development are noticeable. An individual or the child does not pass from the stage immediate and concrete to the stage of the remote or the abstract, at a particular level of his or her development. The process of maturity continues throughout all stages of development. At the same time, it must be kept in view that there are certain behaviour patterns and certain development trends which are absent at one stage but are visible in the next stage or still inanother higher stage.

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Factors Affecting Intellectual Development

The following factors affect intellectual development:

1. **Heredity**: Intellectual development of an individual is greatly affected by the interaction between inherited intelligence and the individual's experience.
2. **Physical growth**: There is a strong relation between physical growth and intellectual development. A healthy person is likely to have a better intelligence than a person who has a poor physique.
3. **Physical environment**: Physical environment such as fresh air, sufficient light and ample space has a great bearing on intellectual development.
4. **Family environment**: The kind of discussions held in the family, the type of reading material such as books and magazines read by the family affect the intellectual development.
5. **Socio-economic status of the family**: Parents of high socio-economic group have better access to send their children to good schools.
6. **School environment**: The methods of teaching, availability of good reading material in the library, attitudes of teachers and school discipline affect intellectual development.

It is concluded that intellectual development is the result of a large number of factors. It is not an automatic process. It is a gradual and painstaking process.

8.3.2 Achievement in Stages of Intellectual Development

The stages of intellectual development include the following changes:

1. Sensory Motor Stage

- Taking reflex actions
- Coordination of reflex actions
- Secondary circular responses are developed
- Coordination of secondary schemata
- Learning the qualities of objects by trial and error
- Discovery of new means through mental combination

2. Pre-Operational Stage

- Relating the surrounding objects, animals and words
- Learns by imitation and play way
- Development of egocentric thinking
- Language development

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- Application of thinking and logic
- Understanding of concrete as well as abstract concepts

3. Concrete Operational Stage

- Practical and realistic thinking
- Beginning to cultivate logic and problem solving abilities.
- Development of sequential thinking

4. Formal Operational Stage

- Mental faculties are matured
- Sequential process of thinking
- Expansion of problem solving capacity
- Development of abstract thinking

Check Your Progress

5. What is a concept?
6. State the important aspects of language development.
7. What are the factors which affect intellectual development?

8.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. A scheme is an organized pattern of behaviour which the child develops when he or she is engaged in any activity.
2. The schemes change from one stage to another by the process of equilibration—maintaining balance between the child and his or her changing environment. According to Piaget, when by the existing scheme, the new situation is not fully handled, then a state of disequilibrium or an imbalance between what is understood and what is encountered is created.
3. Concrete operational stage is considered as the most important stage in cognitive development because it marks the beginning of logical or operational thought. The learner is oriented towards practicality and applies logic and problem solving thinking in concrete problems. The learner is able to sequence the object on the basis of sequence of their attributes.
4. A concept is the generalized meaning that is attached to an object or idea. It is the result of one's perceptual experiences.

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5. The important aspects of language development are speech, vocabulary and length of responses.
6. The factors which affect intellectual development are heredity, physical growth, physical environment, family environment, socio-economic status of the family and school environment.

8.5 SUMMARY

- Piaget called 'schemas' as cognitive structures or the patterns of behaviour that children and adults use in dealing with objects in their environment.
- Assimilation implies incorporation of something from the environment. New ideas, concepts and stimuli are taken in and incorporated into one's existing set of schema.
- A scheme is an organized pattern of behaviour which the child develops when he or she is engaged in any activity.
- Accommodation involves modification or change of some elements of an old schema or learning new schema which is more appropriate for the new object.
- The structures or the schemes change from one stage to another by the process of equilibration—maintaining balance between the child and his or her changing environment.
- Each child goes through stages of cognitive development in the same sequence which is determined by biological maturation and interaction with the environment.
- A child cannot mentally imagine doing an action or reversing it which is also known as operations or operational thinking.
- The formal operational stage begins at approximately age eleven and lasts into adulthood. During this time, people develop the ability to think about abstract concepts, and logically test hypotheses.
- Learning includes the wide range of activities. Rigid distinctions such as classroom for instruction, laboratory for practicals, recess for amusement, and mathematics for developing computational ability and athletics for strengthening the body muscles are unnecessary.
- Action stresses the role of active exploration. A child is active when he or she stares at objects.
- An important part of Piagetian model is repetition of an act by a child. The role of practice varies with development.
- According to Piaget, a learner desires to reduce his or her internal conflicts by keeping his or her thoughts harmonious and in equilibrium.

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- Memory is a symbolic representation of how the child has schematized what he or she sees. Experiments conducted by Piaget reveal that after six months, 61 per cent of the children from 4-8 years of age regressed in their memory ability, if tested by recall or evocation.
- The educational implication of Piaget's cognitive development theory was applied by educationists in the field of teaching and learning.
- Within the classroom, learning should be student-centered and accomplished through active discovery learning.
- Mental development or intellectual development is the development of the mental abilities and capacities which help an individual to adjust his or her behaviour to the ever changing environmental conditions or to enable him or her to accomplish a task that needs complex cognitive abilities.
- Impressions take the form of perception when they are interpreted and some definite meanings are attached to them.
- A concept is the generalized meaning that is attached to an object or idea. It is the result of one's perceptual experiences. It involves both discrimination and generalization.
- Memory is also an important element of mental development. There is little memory at birth but it gradually increases with maturation and experience.
- There is a strong relation between physical growth and intellectual development. A healthy person is likely to have a better intelligence than a person who has a poor physique.

8.6 KEY WORDS

- **Accommodation**: It refers to a process which involves modification or change of some elements of an old schema or learning new schema which is more appropriate for the new object.
- **Assimilation**: It refers to a process which incorporates something from the environment. New ideas, concepts and stimuli are taken in and incorporated into one's existing set of schema.
- **Concrete operational stage**: It refers to a stage in which the learner is oriented towards practicality and applies logic and problem solving thinking in concrete problems.
- **Mental development**: It refers to the development of the mental abilities and capacities which help an individual to adjust his or her behaviour to the ever changing environmental conditions or to enable him or her to accomplish a task that needs complex cognitive abilities.

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8.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are the four stages of intellectual development?
2. Why is cognitive development theory been criticized by psychologists?
3. What are the main characteristics of pre-operational stage?
4. State the main stages of intellectual development.
5. What are the main aspects of mental development?

Long Answer Questions

1. Explain the stages of cognitive development theory.
2. Discuss the main aspects of learning.
3. Analyse the implications of Jean Piaget's theory of cognitive development.
4. Discuss the concept of mental development.
5. Explain the factors which affect intellectual development.

8.8 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

BLOCK - III
LANGUAGE DEVELOPMENT

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UNIT 9 ACQUISITION

Structure

9.0 Introduction
9.1 Objectives
9.2 Acquisition of Concept
  9.2.1 Development of Concept of Objects
  9.2.2 Development of Imagination
9.3 Development of Moral Standards
  9.3.1 Development of Aesthetic Standards
  9.3.2 Cognitive Abilities of the Pre-School Child
9.4 Answers to Check Your Progress Questions
9.5 Summary
9.6 Key Words
9.7 Self Assessment Questions and Exercises
9.8 Further Readings

9.0 INTRODUCTION

Acquisition is defined as the first stages of learning when a response is established. There are various abilities that need to be developed among children. Concepts are defined as the representations of perceptual or sensory experience, or combinations of such experiences that an individual experiences during his or her childhood.

It becomes important to understand that acquisition of object, understanding and building up of an immense strong foundation of understanding the concepts is an essential domain. There is an innate need of developing imagination, creativity among children so that the children are able to think logically and with reasoning. There are various methods, strategies and activities that the teachers and parents can conduct for developing imagination among children. There are various developmental activities for developing cognition power of the child. This is of great importance that identification and understanding of concepts builds up the foundation of the child.

In this unit, the development of concepts and stages involved in the process of concepts has been discussed. The importance of creative faculties in a child's life and the various ways in which these can be developed has been explained. The unit will also help one to analyse the process of developing moral skills and the importance of aesthetic standards. The ways in which cognitive development can be developed has been highlighted.

9.1 OBJECTIVES

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

- Discuss the process of development of concepts
- Anlayse the importance of imagination in an individual's life
- Identify the ways to improve child's creativity
- Discuss the process of development of moral skills
- Interpret the importance of aesthetic standards
- Analyse the different ways to improve cognitive development in children

9.2 ACQUISITION OF CONCEPT

Concepts are the direct representations of perceptual or sensory experience, or combinations of such experiences that an individual experiences during his or her childhood. The child has to not only identify the relevant part of the situation being labeled, but also isolate a concept at the correct level of abstraction which involves reasoning and critical thinking. Infants learning their first words begin with a strong conceptual foundation of the words

Concept development refers to the basic understanding that is necessary to make sense of one's world. It includes ideas about the self and others, objects, and the environment. Concepts provide an efficient way of organizing experience and facts. Concepts are used by children and adults to extend the known information to previously unknown cases through a process called *inductive inference*. Such inferences are not based on perceptual similarity alone.

Some of the general strategies that can be helpful in assisting children who are deaf or blind to develop concepts are enlisted as follows:

- Use activities that are meaningful to the child
- Use activities that the child enjoys
- Attach language to all experiences
- Build on language that is already known to the child
- Use a total communication approach that is appropriate for the child
- Remove variables that may cause confusion for the child
- Generalize the concepts to a variety of situations.

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9.2.1 Development of Concept of Objects

Concepts of objects is complete across space and time have been documented in infants within several months after birth, but there is no such evidence that about how such concepts arise during developmental years among individuals.

Understanding these objects are unitary entities that exist independently of our actions is fundamental to adaptive perception and world-knowledge. This is described in different stages by Piaget. In stage 1, he proposed that the object concept develops slowly and gradually in infancy in. In stage 2, an object disappears the baby continues to look to the location where it disappeared and does not search. In stage 3, infants can now anticipate objects visually and can visually search for an object if he or she drops it out of sight will search for partially hidden but not for completely hidden objects. In stage 4, infants search for hidden objects but even now they are not able to understand that an object is something that exists in-and-of-itself. Rather, the object is still part-and-parcel of the action used to find the object. This is important to be developed among children so that they are able to recognize the objects and achieve object permanence.

9.2.2 Development of Imagination

Imagination is a creative endeavor for any individual. Imagination is more important than knowledge. Imagination is the door to possibilities. It is where creativity, ingenuity, and thinking outside the box begin for child development in an individual. Imaginative and creative play is how children learn about the world. During imaginative situations, play is the foremost way of letting children manipulate materials, express themselves verbally and non-verbally without any hesitation, plan, act, interact, react, and try different roles to play and experience. Imagination fosters cognitive and social development in an individual. In early childhood education, critical thinking skills and creative problem-solving abilities are goals for children's development. In imagination, the child learns to try new ways of doing things, and experimenting helps to develop critical thinking in children and foster creative problem solving. Imagination and creativity are also skills that our children need in their daily lives at present and future.

Suggestions for Nurturing Your Child's Imagination and Creativity

The following ways can be implemented for nurturing a child's imaginative and creativity skills:

- **Spend time with the child outdoors:** It provides countless opportunities for discovery, creativity to child because the more the child is expose to outdoor activities, the more he or she will get chance to develop and enhance his or her imagination. With various activities to be done in an outdoor platform, it inspires child to think, question, make suppositions,

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make alterations and develop creative mind and overall imagination. Children can be engaged in different activities such as to draw in sand, make designs with twigs, build forts with branches, or simply lie on the ground and look up at the sky

- **Simulations:** Engage the child in simulation situations where the child has to be in different roles and so this may enhance the creativity in child. Let your child lead your playtime together. If the child performs in different situations, he or she will have to think himself or herself in different situations, think of the decisions he or she may have to take and react in different situations.
- **Verbal activities:** The child can be engaged in verbal activities involving practice from rhymes to riddles, silly sounds to phonics, games or making up lyrics to common tunes. These verbal interactive activities can inspire and nurture creative minds by enhancing their vocabulary. Simultaneously, these activities build vocabulary and help the child to learn phonics by identifying 'te' sounds of the words and then imagining them to speak in front of everyone. These games are also the perfect and fun way to spend time in car rides.
- **Encourage art and craft activities:** Art is a creative expression that nurtures imagination, not a lesson in following directions. Through activities such as painting, collage, clay work, drawing or any other medium, art is an efficient way for children to work through emotions, make decisions, and express their ideas and be imaginative to the core. Such activities develop fine motor skills and hand-eye coordination and boosts confidence. Furthermore, art activities build confidence because children gain a sense of mastery over materials resulting in a new creation.
- **Ask open-ended and thought-provoking questions to children:** Asking questions that provoke imaginative and creative thinking is an effective way to identify the ability of the child to express his or her ideas and share his or her visions and also enhance his or her logical reasoning while giving him or her the message that his or her ideas are important and the way of expressing them is also important as only having them in the mind.
- **Limit the time provided to child for television, movies, computer and video games:** It is primarily done so that the child should not be always engrossed in media related activities. This is evident that continuous watching TV and other media related activities, the child's mind gets blocked and ceases to think creatively because it is always preoccupied with media shows or video games. Nurturing imagination and parenting in the digital age can be tough. Focusing on a screen is a passive way of learning for children. An alternative would be to

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encourage children to create something new and different. Engaging children in a kinesthetic manner using their entire bodies and their five senses also opens the mind.

Imaginative play and drama based activities enable children to explore the world around them and the people in it. Imagination also develops neurological connections in pupil's brain from moving around and using their senses and muscles. Delving into imaginative worlds based on the experiences that they see around them helps young pupils to make sense of their reality and learn how to communicate with others. Imagination caters the development of the child's basic skills. It has a great impact on their understanding and learning. With that being said, we should encourage our children to continue to practice their imagination and creativity from childhood only. We should be around them to help them identify and understand the situation or things correctly. We should not hold them back. Instead, we should allow them to discover more, explore and learn. We should let their imagination grow to prepare them to the bigger challenge in life.

Indeed, educators are using pretend games to teach math and reading (Clements, &Sarama, 2009; Ginsburg, 2006). Children play imaginatively and creatively in various different ways based on many factors such as age and play environment. Children can engage in imaginative and creative play by themselves or with others.

Imaginary play happens when children use their imaginations to create pretend and make-believe scenarios expected to where they are engaged in this type of play using small toy figures, puppets, and stuff toys for example. Or children can act out a particular role themselves and become a part of a play drama or simulation so that they develop their creativity and imagination. Arts and crafts, and construction or building play are different ways for children to express their creativity, encourages focus and concentration, and develops fine motor skills and eye-hand coordination. It also allows children to feel proud of themselves and gain a sense of mastery after they have created something.

Check Your Progress

1. Define concept development.
2. What are the advantages of art and craft activities?

9.3 DEVELOPMENT OF MORAL STANDARDS

Developing a moral compass in children is a responsibility that must be shared by the family, educational institutions and the community at large. Each one of them has a role to play in instilling personal and collective values and

supporting the development of the individual's ability to judge what is right and wrong and to know how to act accordingly.

Lawrence Kohlberg, an American psychologist proposed six stages which might be viewed in this form:

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Level 1 (Pre-Conventional) (up to age 9)

- Obedience and punishment orientation
- Self-interest orientation

Level 2 (Conventional) (10 years old to adolescence)

- Interpersonal accord and conformity
- Authority and social-order maintaining orientation

Level 3 (Post-Conventional) (adulthood)

- Social contract orientation
- Universal ethical principles

The first level of moral thinking is generally found at the elementary school level where there is obedience or punishment for the child. In the first stage of this level, people behave according to socially acceptable norms because they are told to do so by some authority like figure (for example, parent or teacher). The second stage of this level is characterized by a view that right behavior means acting in one's own best interests. In this the child learns to understand the actions that are suitable for his or her own interests in different situations. The second level of moral thinking is that generally found in society, hence the name 'conventional'. The third level of moral thinking is one that Kohlberg felt is not reached by the majority of adults because of its nature i.e. following the universal ethical principles that should be ideally followed. The fourth level of moral thinking is that of law and order morality where the child develops sense of what is correct by law morality and order. The last stage (stage 6) is based on respect for universal principle and the demands of individual conscience. Thus, according to Kohlberg, it was important to present them with moral dilemmas for discussion which would help them to see the reasonableness of a higher stage morality and encourage their development in that direction. He saw this as one of the ways in which moral development can be promoted through formal education. Kohlberg believed, that most moral development among individuals usually occurs through social interaction.

According to authors, Breckenridge, M E and Vicent E. in *Child Development* in 1943 pointed out these things that are needed for moral development:

- Emotional security, tendency to get affection and respect of others.

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- Acquisition of healthy means for expression of feelings in order that the person does not go in undesirable direction.
- To have some self-control in order that childish tendencies may be rightly checked.
- Enlargement of social attitude in order that a person is able to show sympathy and tolerance towards others and pay attention to the rights and conveniences of others.
- There are certain factors that influence moral development among children such as family, school, intelligence, peers.

9.3.1 Development of Aesthetic Standards

Children need to develop their aesthetic abilities with different strategies. Aesthetic development is important because it enhances the imaginative and creative power of the child. Artistic formalism is the view that the artistically relevant properties of an artwork—the properties in virtue of which it is an artwork and in virtue of which it is a good or bad one—are formal merely, where formal properties are typically regarded as properties graspable by sight or by hearing merely. Artistic formalism has been taken to follow from both the immediacy and the disinterest theses (Binkley 1970, 266–267; Carroll 2001, 20–40). Teachers can conduct many activities for developing aesthetics among children such as encouraging students to form groups and indulge in arts, writing compositions and drama. Psychologist, Ognjenović (1997) defined aesthetic experience as a special kind of subject-object relationship in which a particular object strongly engages the subject's mind, shadowing all other surrounding objects and events. Throughout the process of aesthetic education, the teacher must master various types of knowledge, abilities and evaluation criteria, which will help them to differentiate: the beautiful from the non-beautiful, the aesthetically valuable from the non-valuable and artistically valuable work from non-valuable work. In this way, the child will be able to develop the foundations for judging and evaluating the beautiful. The teacher should provide opportunities to children for developing aesthetic abilities among them. There should be regular encouragement and reinforcement to develop aesthetic ability of the children.

9.3.2 Cognitive Abilities of the Pre-School Child

Preschoolers are eager to learn how the world works, and the best way for them to learn at this age is through play. New skills are constantly being acquired and improved upon their imaginations are becoming a primary vehicle for play and learning. They begin to compare, contrast, organize, analyse, and come up with more and more complex ways to solve problems. Math and scientific thinking become more sophisticated. Most of the children will be starting to assert their independence on a larger scale. In addition to the desire to do things for themselves and to explore new concepts.

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Cognitive development pertains to skills regarding learning and thinking. It is not remembering facts and trivia. Cognitive skills include reasoning, asking questions, problem solving, understanding cause and effect and visual discrimination.

Through play, the preschoolers builds self-esteem and confidence, develops problem-solving skills, encourages new vocabulary usage, teaches children to collaborate, teaches children to be alone and independent, allows children to release their emotions, encourages planning and thinking ahead

The following are some top activities which one can be incorporated into one's daily routine to promote pre-school cognitive development:

Memory and Puzzle Activities

Memory matching games or other simple card games helps the preschoolers to work with intelligence and work through a problem to find the answer or a solution. These activities help to build logical reasoning among children. Through puzzles, the child is able to critically think in various situations at the same time and exhibit high level of decision-making and problem solving ability. Similarly, puzzles provide children with opportunities to enhance their problem solving skills as they figure out where pieces fit or do not fit in shapes, sizes and colour patterns. Puzzles and memory games teach preschoolers to solve problems and think in a more reasonable and logical way. Memory games help to retain and increase the recalling power of the child. They define the intelligence and retaining knowledge power of the child. These activities must be conducted frequently to enhance the chance of developing the child cognitively.

Learning to Sorting and Classifying Activities

Classifying with different shapes, sizes and colours, the child learns to gradually learn to differ. This is very important because the base reasoning and differentiation should be enhanced among children and this plays a large role in a preschooler's cognitive development too. Through sorting, children begin to understand that certain things have similarities and differences. This type of logical thinking forms the foundation for future mathematical concepts and learning even the everyday tasks of the child where he needs to sort and compile different things and situations in his or her progression of life. One must choose activities that encourage sorting and classifying items, such as sorting toys by colour, type or size.

Sequencing Activities

It is important to teach sequencing to children because they learn to arrange in sequence, solve problems with thinking about the solutions in sequence. Preschoolers typically use their own routines to understand events and recall sequence of events and situations. They can be made to understand time in a

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general way for example, 'yesterday' could mean something that happened anytime in the past and then ask them about the next coming day, but can work on their sequencing skills to develop a better sense of time. For example, one could ask preschoolers to draw a sequence of their morning routine in the correct order. As an educator, remember to emphasize sequencing words like, first, start, finish, next, last, then, before and after so they become a part of a preschooler's vocabulary and also understand the logic behind these types of sequences and their uses in their daily lives.

Symbolic Activities

Symbolic activities enhance the imagination of the child where he or she learns to experience and retain with understanding that there are certain symbolic interpretations of the objects, situations and events. Both parents and caregivers can support preschool cognitive development by playing symbolic games with their children. Taking part in imaginary play with a preschooler helps them develop their natural curiosity about the world, understanding the necessary things to understand which are symbolic of anything. These activities also invoke their problem solving skills and helps develop their focus and attention as well.

During the preschool years, children undergo a period of rapid brain development. Parents and teachers can help maximize this period of brain development by supporting children with certain types of experience and activities, as well as encouraging children to pursue interests and play that come naturally to them. These activities lead them to identify, understand, learn, interpret and symbolically reflect on various situations through which they undergo from their childhood to adulthood.

Some play ideas to support the child's cognitive development are as follows:

- Play simple board games like 'Snakes and ladders' with the child, or simple card games.
- Read books and tell jokes and riddles.
- Encourage building and construction games.
- Do simple jigsaw puzzles.
- Play games that combine moving and singing – for example, 'If you're happy and you know it'.
- Encourage the child to help in different activities at home. Preschoolers can learn a lot from measuring, counting and naming healthy ingredients for family meals.
- Encourage reasoning among children.
- Ask them open-ended questions.

Learning by doing is best at this age. The child will learn faster if the teacher provides encouragement and support from the sidelines. However, it is important to consider the fact that one must not try and jump to conclusions. The child will let the guardian know if he needs help, so follow his lead.

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Color Recognition

While a preschooler probably will not be able to correctly differentiate between different colors, he or she should have a basic grasp of color recognition and be able to name basic hues so that she or he is able to identify and recognize a good number of colors. By the time, the child reaches four years of age; the child must be able to identify basic colors, like red, orange, yellow, green, blue, black and brown. Actually, color recognition skills are typically separated into three separate aspects: naming, matching and identification.

Counting and Number Concepts

The ability to understand the concept of numbers and to accurately count at least five objects is a cognitive milestone that most children will reach between three and four years of age. From simple concepts of quantity like 'more' and 'less' or vague measurements like 'bigger' and 'smaller' to basic addition, the child should be able to understand what numbers are and how they apply to the world around her or him. Also, the child must be able to logically arrive at a conclusion for calculations or working with numbers.

Following Commands

Preschooler may not always follow directions when she's feeling particularly impudent or isn't paying attention. Still, the child should be demonstrating the recollection and memory, so that the preschooler should also be exhibiting the ability to recall names, specific events and parts of a story after it's been read to her or him. The child should be able to remember the next step in a familiar activity, or things that happened within the last few days. Larger and more important events may be recalled weeks or even months after the fact. During the preschool years, child's brain is developing rapidly. One of the areas in which he or she should be reaching developmental milestones is an increased capacity for memory and recollection.

Engaging in Imaginative and Fantasy Play

Children learn about the world through play, and explore more complex concepts through the safety of imaginative play. The preschooler child should be creating and enjoying fantasy, constructs or be imaginative, engage in role-play scenarios without prompting and hesitating. Speaking and listening (participating in conversations, asking and answering questions, describing things, adding details, speaking audibly, clearly, and in complete sentences)

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Check Your Progress

3. What is the characteristic of second stage of moral thinking?
4. Why is sequencing activity important for children?
5. What is the main use of symbolic activity?

9.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Concept development refers to the basic understanding that is necessary to make sense of one's world.
2. The following are the advantages of art and craft activities:
   (a) Arts and craft is a way in which a child can express his or her creativity.
   (b) It encourages focus and concentration, and develops fine motor skills and eye-hand coordination.
   (c) It also allows a child to feel proud of him or her and gain a sense of mastery after he or she has created something.
3. The second stage of moral thinking is characterized by a view that right behaviour means acting in one's own best interests. In this the child learns to understand the actions that are suitable for his or her own interests in different situations.
4. Sequencing activity is important for children because they learn to arrange in sequence, solve problems with thinking about the solutions in sequence. Preschoolers typically use their own routines to understand events and recall sequence of events and situations.
5. Symbolic activity enhances the imagination of the child where he or she learns to experience and retain with understanding that there are certain symbolic interpretations of the objects, situations and events.

9.5 SUMMARY

- Concepts are the direct representations of perceptual or sensory experience, or combinations of such experiences that an individual experiences during his or her childhood.
- The child has to not only identify the relevant part of the situation being labelled, but also isolate a concept at the correct level of abstraction which involves reasoning and critical thinking.

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- Concept development refers to the basic understanding that is necessary to make sense of one's world.
- Concept development includes ideas about the self and others, objects, and the environment. Concepts provide an efficient way of organizing experience and facts.
- Concepts are used by children and adults to extend the known information to previously unknown cases through a process called *inductive inference*.
- Concepts of objects is complete across space and time have been documented in infants within several months after birth, but there is no such evidence that about how such concepts arise during developmental years among individuals.
- Imagination is a creative endeavour for any individual. Imagination is more important than knowledge.
- Engage the child in simulation situations where the child has to be in different roles and so this may enhance the creativity in child.
- If the child performs in different situations, he or she will have to think himself or herself in different situations, think of the decisions he or she may have to take and react in different situations.
- The child can be engaged in verbal activities involving practice from rhymes to riddles, silly sounds to phonics, games or making up lyrics to common tunes.
- Art is a creative expression that nurtures imagination, not a lesson in following directions. Engaging children in a kinesthetic manner using their entire bodies and their five senses also opens the mind.
- Imagination also develops neurological connections in pupil's brain from moving around and using their senses and muscles.
- Arts and crafts, and construction or building play are different ways for children to express their creativity, encourages focus and concentration, and develops fine motor skills and eye-hand coordination.
- Developing a moral compass in children is a responsibility that must be shared by the family, educational institutions and the community at large.
- The first level of moral thinking is generally found at the elementary school level where there is obedience or punishment for the child.
- Aesthetic development is important because it enhances the imaginative and creative power of the child.
- Throughout the process of aesthetic education, the teacher must master various types of knowledge, abilities and evaluation criteria, which will help them to differentiate: the beautiful from the non-beautiful, the

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aesthetically valuable from the non-valuable and artistically valuable work from non-valuable work.

- Preschoolers are eager to learn how the world works, and the best way for them to learn at this age is through play.
- Cognitive development pertains to skills regarding learning and thinking. It is not remembering facts and trivia.
- Cognitive skills include reasoning, asking questions, problem solving, understanding cause and effect and visual discrimination.
- Memory matching games or other simple card games helps the preschoolers to work with intelligence and work through a problem to find the answer or a solution.
- Classifying with different shapes, sizes and colours, the child learns to gradually learn to differ. This is very important because the base reasoning and differentiation should be enhanced among children and this plays a large role in a preschooler's cognitive development too.
- It is important to teach sequencing to children because they learn to arrange in sequence, solve problems with thinking about the solutions in sequence.
- Symbolic activities enhance the imagination of the child where he or she learns to experience and retain with understanding that there are certain symbolic interpretations of the objects, situations and events.
- The ability to understand the concept of numbers and to accurately count at least five objects is a cognitive milestone that most children will reach between three and four years of age.
- Preschooler may not always follow directions when she's feeling particularly impudent or is not paying attention.

9.6 KEY WORDS

- **Art**: It refers to a creative expression that nurtures imagination, not a lesson in following directions.
- **Aesthetic experience**: It refers to a special kind of subject-object relationship in which a particular object strongly engages the subject's mind, shadowing all other surrounding objects and events.
- **Concepts**: It refers to the direct representations of perceptual or sensory experience, or combinations of such experiences that an individual experiences during his or her childhood.
- **Memory matching game**: It refers to games which helps the preschoolers to work with intelligence and work through a problem to find the answer or a solution.

9.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

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Short Answer Questions

1. What are the main uses of concepts?
2. Define inductive inference.
3. What are the four main stages of concept of objects?
4. How does imagination foster social development in a child?
5. What are the ways in which a child can develop aesthetic standards?

Long Answer Questions

1. How are objects developed? Discuss in detail.
2. 'Imagination is more important than knowledge.' Elucidate the statement.
3. What are the ways which can help to nurture a child's creativity? Explain.
4. Discuss the six main stages of moral skills.
5. Explain the ways in which cognitive development can be inculcated in preschoolers.

9.8 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education*. United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

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UNIT 10 OVERVIEW OF LANGUAGE DEVELOPMENT

Structure

10.0 Introduction
10.1 Objectives
10.2 Introduction of Language
  10.2.1 Language Development: Learning to Speak
10.3 Stages of Language Development
  10.3.1 Factors Influencing Language Development
  10.3.2 Activities Relating to Language Development
  10.3.3 Behaviourist Theory for Language Development
10.4 Answers to Check Your Progress Questions
10.5 Summary
10.6 Key Words
10.7 Self Assessment Questions and Exercises
10.8 Further Readings

10.0 INTRODUCTION

Language plays an important role in developing the personality of the child. There is a process for language development which involves many stages. From infancy to adulthood, there are various stages that a child has to pass through for developing language in them.

Language skills involving listening, speaking, reading and writing are all necessary to be developed among children. There are many factors that determine the language development such as family, physical health and environmental influences that contribute in its development.

In this unit, the meaning, functions and components of language have been explained. The process and stages of language development along with the factors which influence language development have been explained. The unit will also analyse the activities of language development and meaning of language acquisition.

10.1 OBJECTIVES

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

- Analyse the meaning and functions of language
- Identify the main components of language
- Explain the process of language development
- Interpret the meaning of language acquisition

- Discuss the stages and factors influencing language development
- Identify the activities of language development
- Explain the behaviourist theory of language

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10.2 INTRODUCTION OF LANGUAGE

Language is a code that we learn to use in order to communicate ideas and express our wants and needs. Reading, writing, speaking, and some gesture systems are all forms of language. Language has played a crucial role in social evolution, the emergence of civilization and social network. Language has mainly two functions, first it serves as a tool to express oneself and the other is to communicate. '...language is not complete in any speaker; it exists only within a collectivity...only by virtue of a sort of contract signed by members of a community' (de Saussure, 1966, p. 14). Language was thus, seen as an abstract property of a group, related to its variable individual speakers somewhat as a species is to its variable individual members.

Let us discuss the functions of language in detail in the following section.

Expressive and Communicative Functions

The most basic function of language is to express oneself on various thoughts and expressions.

1. **Interpretative Function:** The interpretative function serves to restore a state of cognitive equilibrium. While the stimulus itself creates a condition of uncertainty, the interpretation serves to clarify the situation and restore equilibrium.
2. **Control Function:** When one talks of the function of control, there emerges a social dimension apart from the individual differences.
3. **Social Function:** Language is required for developing social relations among individuals. It is used to build social relations with others.
4. **Creative Function:** Language plays an important role in developing imaginative and creative activity.

To understand and use a language effectively, children must master four basic components of the language. First, they must master phonology: They must know how words sound and be able to produce the sequence of sounds that make up any given word. Second, they must master semantics, the meanings of a large number of words. Third, they must have a good command of syntax, rules for how words can legitimately be combined to form understandable phrases and sentences. Finally, children must master the pragmatics of language, the use of social conventions and speaking strategies that enable effective communication with others. Some early theorists

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suggested that language development is largely the result of modeling—that children simply imitate the speech of others. Observation and imitation of others are certainly involved in language development to some degree. Infants occasionally imitate the specific sounds and general sound patterns that parents and other caregivers make (M. H. Goldstein and Schwade, 2008; Tronick, Cohn, & Shea, 1986).

10.2.1 Language Development: Learning to Speak

Language development is thought to proceed by ordinary processes of learning in which children acquire the forms, meanings, and uses of words and utterances from the linguistic input. Children often begin reproducing the words that they are repetitively exposed to. The method in which we develop language skills is universal. Language development is a process wherein the infant learns to babble, learn letters, words, sentences, combination of words in sentences, and development of listening, speaking, reading and writing skill. Children's language development, one of the important and interesting issues in the psychology of language. Psychologist, Dickinson (2001) study of seven-year-old children, the students interact with teachers and students interact with parents, playing with other children, talking with them, reading to them by teachers and parents as important factors for growth Language.

The two most important skills in describing the development of language in children are receptive skill and expressive skill. The receptive language skill is always in advance of the expressive language skill. The development of receptive skill begins at birth when the newly born infant is immediately exposed to all different kinds of noises. At first infant cannot distinguish between the sounds, but after approximately six to eight weeks, he or she is able to recognize the differences between a human voice and other noises. This voice is usually his or her mother's voice and the infant may show recognition by a facial expression such as a smile. By nine months he or she begins to respond to a few simple words: very often the names of toys or teddy bear. At this time he or she may respond by gesture or movement. By twelve months infant can usually respond commands (Stork and Widdowson, 1974). As psychologists, Stork and Widdowson (1974) propose the development of the expressive language skill is the beginning of active participation in speech and language. At this stage, the infant can respond vocally to pain, such as hunger, pleasure and satisfaction, but these are just reflexes. The development of speech indeed begins when infant can produce sounds at will by conscious effort. This kind of sound production is known as babbling which begins towards the end of the third month of life. At this stage, child produces only a limited number of sounds. By about six months, he or she is producing a wide range of sounds and is using them in his or her play. By nine months, he or she is capable of responding to simple words. At this stage, he or she learns to repeat the same sound or sounds over

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and over again. The child usually produces a syllable consisting of consonant plus vowel which is often called 'reduplication stage'. The child will begin to use his or her first words at about twelve months. The forms such as mama or dada, which occur very early during the reduplication stage, are not considered as words. Reduplicating syllables consisting of bilabial or alveolar consonants and low front vowels are used in many languages as children's names for parents. At about the same time child begins to use a few recognizable words which he or she invents for himself or herself which are called Jargon. The development of jargon is an important stage in the acquisition of language (Stork &Widdowson, 1974: 135). When the child is about eighteen months he or she will be using perhaps about twenty meaningful words and a great number of jargons. At this stage his or her communication with others is limited to single word utterance. The development of words into sentences is indeed the true beginning of grammar. This occurs at about twenty four month old and at first it is limited to the juxtaposition of two words and then gradually develops into more complex sentences. A child usually acquires most of the grammatical forms of native language by five or six years old (Kess, 1993).

Language acquisition is seen as having certain cognitive prerequisites or co-requisites. That is, the child will not develop linguistic forms before acquiring the cognitive bases for those forms. For example, the child is expected to learn where question/location answer prior to the when-question/ time answer because the concept of place is acquired prior to the concept of time, and this order is cognitively determined. Psychologist, Kess (1993:305) also discuss that a form which is linguistically simple may be conceptually difficult. Like Kess, Slobin (1973) also suggests that conceptual development proceeds grammatical development and determines the acquisition of order of some grammatical forms.

Language acquisition is the process whereby children achieve a fluent control of their native language (Varshney, 2003:307). Children learn a language, not because they are subjected to a similar conditioning process, but because they possess an inborn capacity which permits them to acquire a language as a normal maturational process. This capacity is universal. The child has an innate language acquiring device. He or she learns a language by exposure to it in society and by unconsciously forming certain hypothesis about language, which he or she goes on modifying till he or she comes to the adult model to which he or she is for the most part exposed. So, the child goes on constructing an innate grammar, operating over generalized rules. The capacity for acquiring language is remarkable a number of reasons (Langacker, 1973:12-13).

Language acquisition is a process whereby children achieve a fluent control of their native language (Varshney, 2003:307). The ability to get and understand the language is inherited genetically but the particular language

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that children speak is culturally and environmentally transmitted to them. According to psychologist, Chomsky (2009:101-102) language acquisition is a matter of growth and maturation of relatively fixed capacities, under appropriate external conditions. The form of acquisition and use of language is acquired is largely determined by internal factors; it is because of the fundamental correspondence of all human languages, because of the fact that 'human beings are the same, wherever they may be', that a child can learn any language. Language acquisition at age 1-3 years old occurs naturally. It is meant that a child is insensibly acquiring the language but the fact he or she can produce the language for communication. The process of acquiring the language at the age before 5 years old is known as 'Golden age'. This period show the progress of language development from one stage to another. The functioning of the language capacity is, furthermore, optimal at a certain 'critical period' of intellectual development. In addition to that, the term, 'language acquisition' is normally used without qualification for the process which results in the knowledge of one's native language (or native languages). Language development is enriched by verbal interactions with other children and adults. Parents and care-givers can have a significant impact on early language development.

Language acquisition is the process of building the ability to understand a language, using it to communicate with others. In the sense of first language acquisition, however, it refers to the acquisition (unconscious learning) of one›s native language (or languages in the case of bilinguals) during the first 6 or 7 years of one›s life (roughly from birth to the time one starts school). Language acquisition for any generation of children consists of achieving mastery in four main areas, i.e. acquiring. The following are the four main areas related to acquisition of language:

1. A set of syntactic rules which specify how sentences are built up out of phrases and phrases out of words.
2. A set of morphological rules which specify how words are built up out of morphemes, i.e. grammatical units smaller than the word.
3. A set of phonological rules which specify how words, phrases and sentences are pronounced.
4. A set of semantic rules which specify how words, phrases and sentences are interpreted, i.e. what their meaning is.

The process of language development can be divided into three main broad categories:

1. A stage where the child acquires an ability to produce or make speech sounds and utterances.
2. The ability to comprehend, understand and interpret.
3. The ability to actively communicate through adult level language.

Organs of Language Development

1. Understanding of the language by hearing it through the ears.
2. Speaking of the language by producing the sounds with the help of vocal organs.
3. Recognition of the alphabets and letters with the help of eyes.
4. Writing language with the help of figures.

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Check Your Progress

1. What are the categories of language development?
2. State the social function of language.
3. What are the two important skills related to development of language?

10.3 STAGES OF LANGUAGE DEVELOPMENT

There are fairly definite *stages* which a child goes through during early language acquisition. These form a *progression* from the babbling stage to that of the multi-word sentence. The first comprehensible word is usually uttered between nine months and one year. By the age of 6 or 7, a child has acquired all the structural features of his/her native language.

- **Infancy Stage (Birth to 5 years)**

There are three preliminary forms of communication used by infants during the first few months of life-crying, babbling and body movements or gestures. Moreover, the speech pattern and comprehension is an important aspect. Comprehension is the ability to understand the meaning of the words uttered by others. In the early language responses, the child is able to understand the language to others before he or she starts saying the words himself or herself. The child from infancy starts to develop general vocabulary where the child first learns the easiest and most useful words. Then specific vocabulary at around age of 2 years, number vocabulary at around age two or three years where the child learns counting, color vocabulary where the child sees the things of different colors, time vocabulary where the child learns different parts of the day, seasons. At around the age of one and half years, infant's language consists of one word sentences, by the age of two and half years, most students speak in full sentence. The child's pronunciation also improves after the age of 18 months and the child learns to speak, read and write language. According to Bolinger (2002:283), pre-talking stage or cooing is the vowel-like sound responding to human sounds more definitely, turns head, eyes seem to search for speaker occasionally some chuckling

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sounds. Babbling is the sounds which infants produce as consonant-vowel combinations, Steinberg (2003:147). The sounds which are produced by infants but not all the speech sounds are same in language of the world.

- **At Childhood stage**

With the advancement of age of the child, he or she learns language with greater complexity, increased vocabulary size. Child is able to develop language for narration, and question-answering. The language skills of the child improves- listening, speaking, reading and writing. According to Bolinger (2002:283) at this stage is fastest increase in vocabulary with many new additions everyday; no babbling at all; utterances have communicative intent. There is a great variation among children, seems to understand everything said within hearing and directed to them.

10.3.1 Factors Influencing Language Development

The following are the factors which influences language development:

1. **Physical Health**: If there are physical weaknesses in children such as defects in vocal organs or any difficulty in developing language. Illness can effect hearing which, in turn, will cause problems with understanding spoken language or other auditory cues. Hearing problems can, in turn, effect speech development. Children who are ill also lack enthusiasm to speak and communicate non-verbally. This can hinder development of language and communication. In addition to illness, physical development can influence language. Vocal cords and speech related facial muscles must be developed in order for a child to orally communicate effectively. Fine motor skills are also necessary to write or draw letters and symbols.
2. **Family**: A family's influence such as efforts in developing the language abilities of the child determines the child's language habits. The exposure that a family provides to the child helps in determining his or her interest in language, speaking, reading and communication.parents' monitoring of language interactions with children differs according to their socioeconomic status. Moreover, parents also appear to influence children in different ways. Children whose mothers reported that they frequently read to them, went to the library and puppet theater or cinema, were involved in the process of joint reading, and stimulated their reading and learning of the letters, and guided them to the zone of proximal development achieved higher scores on the Language Development Scale and told more coherent stories with a textless picture book (Fekonja, Podlesek, & Umek, 2005). The environment that a child is exposed to and the involvement that child's parents give them while at home impact their language development.

3. **Environmental Influence:** There are various environmental influences that determine the gradual development of language development. Children who are spoken to and read to are more likely to want to speak and learn to read. Social environment can be a hindrance to language development when there is a lack of example on which children can base their understanding of language and all that it entails.
4. **Cognitive Ability**: It has been suggested that there's a correlation between intelligence and early speech. Children who pick up on the language early show an increased level of cognitive development. They tend to develop early use of proper sentence structure and strong vocabulary. It should be noted, however, that children who are slow to develop language skills are not necessarily slow cognitively, as there may be other factors at play.
5. **Motivation**: If a child has no desire to communicate or understand the world around her or him, there will be a lack of language development. Until he sees the value and need for use of the language, development may be slow.

10.3.2 Activities Relating to Language Development

The following are the main activities of language development:

- Exposure to language sub-systems.
- Pronunciation drill of the difficult words to increase pronunciation among children.
- Teachers should conduct dictations in classes so that children develop spellings and comprehension of the language.
- Teacher should use Language Games in their language teaching. This improves their language interest and also their proficiency in the language.
- Asking of more open-ended questions.
- Drafting story telling activities.
- Brewster, Ellis and Girard (2004:81) suggest that, 'Providing examples of words, their meanings and demonstrating how they might be used when beginning to learn a language may be more important than attention to the grammatical components and spelling of vocabulary'.
- The use of live demonstrations and the presentation of examples of other student's work may provide a more complete description of the standard of content and presentation that is expected for a particular activity and possibly help to ease learner anxiety caused by not knowing what to do (Cameron 2001).
- 'Research has shown that learners use considerably more language, and exploit a greater range of language functions when working in small

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groups' (Nunan 2000:51). Small groups also enable participants to hear language from each other therefore, a different source of input from the teacher. This might help to make students feel more comfortable and relaxed and possibly reduce the anxiety related to attempting the target language (Hill and Flynn 2006).

- Teachers should provide opportunities to increase verbal interaction in classroom activities to help ensure that students are exposed to as many different types of authentic language as possible and allow students opportunities to practice using the target language. Planning for more group and pair work during lessons would help to do this.
- Visual and audio teaching aids helps in developing interests in language among children. Visual materials work as a powerful tool in this aspect, as far as they give teachers the opportunity to show the culture of the target language, the habits and the body language that lie behind the language transactions.
- Teachers should plan lessons in language laboratory for students.
- According to Henderson and Wellington (1998), word games are also beneficial in exposing students to more active reading in a more sociable context. While this strategy may require the teacher to spend more time and effort in preparing the materials, the enjoyment experienced by students is certainly worth it.
- Early researchers such as Adam and Chambers (1962) or Harber and Myers (1982) seem to agree with the idea that the memory for picture-word combination is superior to memory for words alone or pictures alone (Petterson, 2004).
- Graphic images also help students to create relations amongst the words, 'bringing out more detailed, knowledgeable, responsive, awareness to the object, situation or text being communicated' (Canning-Wilson 2001, p.56).
- Encourage children to put on simple plays and shows.
- Let children help you sort coupons and cut ads out of the newspaper.
- Include your child in everyday conversation. Talk about what you are going to do, ask questions, listen.
- Play simple games that teach concepts like over, under, on, and in.
- Read books with poems, songs, and rhymes.
- Encourage your children to repeat favorite stories.
- Help children create their own story books with magazine pictures or post cards.

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10.3.3 Behaviourist Theory for Language Development

An American psychologist, B F Skinner (1957) suggested that reinforcement also plays a role, in that parents and other adults in a child's environment praise or in some other way reward increasingly complex language use. In Skinner's view, when infants make a variety of speech sounds in a seemingly random fashion, adults respond favorably to—and so encourage children to repeat—only those sounds used in the local language. The behaviourist theory believes that 'infants learn oral language from other human role models through a process involving imitation, rewards, and practice. Human role models in an infant'senvironment provide the stimuli and rewards'. (Cooter&Reutzel, 2004).

The behaviourist theory believes that 'infants learn oral language from other human role models through a process involving imitation, rewards, and practice. Human role models in an infant's environment provide the stimuli and rewards (Cooter&Reutzel, 2004)'. Skinner argued that children learn language based on behaviourist reinforcement principles by associating words with meanings. Correct utterances are positively reinforced when the child realizes the communicative value of words and phrases.

The behaviourist B F Skinner then proposed this theory as an explanation for language acquisition in humans. In *Verbal Behaviour* (1957), he stated:

The basic processes and relations which give verbal behaviour its special characteristics are now fairly well understood. Much of the experimental work responsible for this advance has been carried out on other species, but the results have proved to be surprisingly free of species restrictions. Recent work has shown that the methods can be extended to human behaviour without serious modifications. (Cited in Lowe and Graham, 1998, p68)

The following are the main features of behaviourist theory:

1. Behaviourist theory dwells on spoken language. Learning language is primarily what is spoken and secondarily what is written.
2. Behaviourist theory is the habit formation theory of language teaching and learning, reminding us the learning of structural grammar. Language learning concerns us by 'not problem-solving but the information and performance of habits'.
3. All learning is the establishment of habits as the result of reinforcement and rewards, positive reinforcement is reward, and negative reinforcement is punishment. Therefore, language can be learnt through the process of reinforcement where the child is reinforced on every effort he or she makes to learn language. When the child is motivated by rewards, he or she does positive effort in regard to learning language.

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Skinner said that language is behaviour, and, just like any other behaviour, it is learned. This learning occurs through 'reinforcement of successive approximations'.

Check Your Progress

4. What are the main features of behaviourist theory?
5. Define babbling.
6. What are the three main preliminary forms of communication used by infants?

10.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The three main categories of language development are:
   (a) A stage where the child acquires an ability to produce or make speech sounds and utterances.
   (b) The ability to comprehend, understand and interpret.
   (c) The ability to actively communicate through adult level language.
2. Language is required for developing social relations among individuals. It is used to build social relations with others.
3. The two most important skills related to development of language are receptive and expressive skill.
4. The following are the main features of behaviourist theory:
   (a) Behaviourist theory dwells on spoken language. Learning language is primarily what is spoken and secondarily what is written.
   (b) Behaviourist theory is the habit formation theory of language teaching and learning, reminding us the learning of structural grammar.
   (c) All learning is the establishment of habits as the result of reinforcement and rewards, positive reinforcement is reward, and negative reinforcement is punishment.
5. Babbling is the sounds which infants produce as consonant-vowel combinations
6. The three preliminary forms of communication used by infants during the first few months of life-crying, babbling and body movements or gestures.

10.5 SUMMARY

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- Language is a code that we learn to use in order to communicate ideas and express our wants and needs.
- Language has played a crucial role in social evolution, the emergence of civilization and social network.
- Language was thus, seen as an abstract property of a group, related to its variable individual speakers somewhat as a species is to its variable individual members.
- Language development is thought to proceed by ordinary processes of learning in which children acquire the forms, meanings, and uses of words and utterances from the linguistic input.
- Language development is a process wherein the infant learns to babble, learn letters, words, sentences, combination of words in sentences, and development of listening, speaking, reading and writing skill.
- The two most important skills in describing the development of language in children are receptive skill and expressive skill.
- Language acquisition is seen as having certain cognitive prerequisites or co-requisites. That is, the child will not develop linguistic forms before acquiring the cognitive bases for those forms.
- Language acquisition is the process whereby children achieve a fluent control of their native language.
- The ability to get and understand the language is inherited genetically but the particular language that children speak is culturally and environmentally transmitted to them.
- Language acquisition is the process of building the ability to understand a language, using it to communicate with others.
- There are three preliminary forms of communication used by infants during the first few months of life-crying, babbling and body movements or gestures.
- The child from infancy starts to develop general vocabulary where the child first learns the easiest and most useful words.
- There are various environmental influences that determine the gradual development of language development.
- Vocal cords and speech related facial muscles must be developed in order for a child to orally communicate effectively.
- With the advancement of age of the child, he or she learns language with greater complexity, increased vocabulary size.

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- Children who pick up on the language early show an increased level of cognitive development. They tend to develop early use of proper sentence structure and strong vocabulary.
- Teacher should use Language Games in their language teaching. This improves their language interest and also their proficiency in the language.
- The behaviourist theory believes that 'infants learn oral language from other human role models through a process involving imitation, rewards, and practice.
- The behaviourist theory believes that 'infants learn oral language from other human role models through a process involving imitation, rewards, and practice. Human role models in an infant's environment provide the stimuli and rewards'.
- Correct utterances are positively reinforced when the child realizes the communicative value of words and phrases.
- Behaviourist theory dwells on spoken language. Learning language is primarily what is spoken and secondarily what is written.
- Behaviourist theory is the habit formation theory of language teaching and learning, reminding us the learning of structural grammar.
- All learning is the establishment of habits as the result of reinforcement and rewards, positive reinforcement is reward, and negative reinforcement is punishment.

10.6 KEY WORDS

- **Language:** It refers to a code that we learn to use in order to communicate ideas and express our wants and needs.
- **Language development**: It refers to a process wherein the infant learns to babble, learn letters, words, sentences, combination of words in sentences, and development of listening, speaking, reading and writing skill.
- **Language acquisition**: It refers to the process whereby children achieve a fluent control of their native language.
- **Pre-talking stage**: It refers to a stage in which a child produces vowel-like sound and responds to human sounds more definitely, turns head, eyes seem to search for speaker occasionally some chuckling sounds.

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10.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are the main functions of language?
2. Write a short note on language acquisition.
3. How is the form of language acquisition determined?
4. What are the main areas of language development?
5. State the premise of behaviourist theory.
6. What are the stages of language development?

Long Answer Questions

1. Discuss the components of language.
2. How is language developed? Discuss in detail.
3. Explain the main areas of language acquisition.
4. What are the factors which affect language development? Explain.
5. Analyse the main activities of language development.

10.8 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education*. United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 11 OVERVIEW OF INDIVIDUAL DIFFERENCE IN ACQUISITION OF LANGUAGE

Structure

11.0 Introduction
11.1 Objectives
11.2 Individual Difference in Acquisition of Language
11.3 Development of Vocabulary of Language
11.4 Promoting Language Skills
  11.4.1 Speech Problems in Childhood
11.5 Answers to Check Your Progress Questions
11.6 Summary
11.7 Key Words
11.8 Self Assessment Questions and Exercises
11.9 Further Readings

11.0 INTRODUCTION

There are many individual differences that are found in developing language among children. It depends on many factors that the individual differences occur among individuals. There are many strategies to develop vocabulary among children.

The role of teachers and parents is of immense importance in developing vocabulary among children. Moreover, there are different four different language skills that are to be developed among individuals. There are different speech impairments too which hampers the personality of the child.

In this unit, the meaning and causes of individual differences have been discussed. The various strategies related to learning and the ways of promoting language skills in children are highlighted. The unit will also explain the concept of vocabulary development and the common speech problems which a child may face.

11.1 OBJECTIVES

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

- Discuss the meaning and causes of individual differences
- Analyse the relationship of individual difference with education
- Explain the learning style strategies

- Discuss the concept of vocabulary development
- Identify the ways of promoting language skills
- Analyse the forms of speech problems in children

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11.2 INDIVIDUAL DIFFERENCE IN ACQUISITION OF LANGUAGE

We will in the following section discuss the various definitions of individual difference in the following section.

A Scottish psychologist, Drever James, 'Variations or deviations from the average of the group, with respect to the mental or physical characters, occurring in the individual member of the group are individual differences'.

Psychologist, John P. DeCeeceo, 'The psychology of individual differences is largely the study of group differences. This study classifies individuals by age, traits, sex, race, social class and so on, and observes the differences within and between those groups. Physical, mental, social and cultural differences etc. are being studied, under individual differences'.

Causes of Individual Differences

The following are the main causes of individual differences:

1. **Heredity:** The chief cause of individual differences is heredity and an individual's inherit various physical traits such as face with its features, colour of eyes and hair, type of skin and size of hands, colour blindness and tendency to certain diseases , mental traits like intelligence, abstract thinking and aptitude. It is an admitted fact that heredity differences result in the quantity and rate of physical as well as mental development indifferent individuals.
2. **Environment:** The second most important cause of individual differences. Environment significantly influences individual differences among children. Owing to the environment, changes in a child's environment are reflected in the changes in his or her personality.

   Environment consists of physical, intellectual, social, moral, political, economic and cultural forces, all these forces cause individual differences.
3. **Influence of caste, race and nation:** Individuals of different castes and races exhibit very marked differences among individuals. There is a wide effect of caste and race on the personality of the individual because of the cultural influence. Similarly individuals of different nations show differences in respect of their personality, character and mental abilities. These are the outcome of their geographical, social and cultural environment.

4. **Gender differences:** It is observed that the physical development of the girl takes place a year or two earlier than the boys. Between the age of 11 and 14, girls are taller and heavier than the boys. Girls are kind, affectionate, sympathetic and tender while the boys are brave, hard, efficient and competent.
5. **Age and intelligence:** Another important factor that causes individual difference among individuals are physical, intellectual and emotional development. Many individuals differ because of the differences in intelligence. Individuals who are below the average in intelligence and mental age find much difficulty in learning and the average intelligent persons can learn quickly.
6. **Temperament and emotional stability:** Another cause is that some people are by temperament active and quick, while others are passive and slow, some humorous and others short tempered. It has been observed that emotional stability of the individual is differently affected by physical, mental and environmental factors. Differences in emotional stability cause individual differences.
7. **Economic condition and education:** Individual differences are caused by economic condition of the parents and the education of the children. There is a wide difference among the individuals with economic differences. It is not possible for the children of two economic classes to have a similarity and equality.
8. **Other Causes:** There are various other causes such as interests, aptitudes, achievements, sentiments, character, and educational and home background lead to individual differences.

Relationship of Individual Differences with Education:

One of the important objectives of modern education is the complete development of the individual. Individuals have different goals, different interests, different emotional problems and different abilities. Since, school work is planned on group basis it presents a formidable challenge to all teachers.

Individual differences in processing speed are correlated with individual differences in intelligence and working memory (Jensen, 1998), and to individual differences in basic verbal (Hunt, Lunneborg, and Lewis, 1975) and quantitative abilities (Geary and Widaman, 1987, 1992).

Teaching plays roles such as guiding, facilitating learning, and encouraging the learner and setting the conditions for learning. Having a good understanding of how the learner learns will help teachers to determine their philosophy of education, their teaching style, approach, methods, and classroom techniques. It is imperative for the teachers to understand the

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individual differences. According to Cook (2001), 'the proof of teaching is in the learning', and 'all successful teaching depends upon learning'.

The role of learner as negotiator—between the self, the learning process, and the object of learning—emerges from and interacts with the role of joint negotiator within the group and within the classroom procedures and activities which the group undertakes. The implication for the learner is that he or she should contribute as much as he or she gains, and thereby, learn in an interdependent way. Students' interdependence is considered important in student-centered learning approaches. Students are expected to interact with each other, rather than with teachers (Richards, 2001). To acquire this capacity, students need to have confidence, high motivation and positive attitudes toward their study (Liu and Zhang, 2007). Therefore, learner autonomy and motivation are important factors for successful teaching and learning.

Language development has long been associated with motor development, particularly manual gesture. Variations in rate within components of early language are also symbolic of individual differences. Having large-scale variation in rate of development within individual components, there is developmental asynchrony between comprehension and production, and between lexical production and grammar of the individual.

There are variations in learning style among children. Continuing our search for the seams and joints of the language processor, it is observed that humans differ from each other due to many biological or conditioned factors (affected by nature) or unconscious forces (affected by past experiences). The many ways in which one learns about these differences that are usually similar, through introspection and interaction with other people, or by reading books and watching television or any form of media. However, in order to conduct research in individual differences, it is necessary to have rigorous instruments, and a scientific way of providing reliable and valid.

It is believed that there is a critical period for first language acquisition in children. Children are believed to have only a limited number of years during which normal acquisition is possible. Beyond that, physiological changes cause the brain to lose its capacity to assume the new functions that learning language demands. Individuals who for some reasons are deprived of the linguistic input which is needed to trigger first language acquisition during the critical period will never learn any language normally. Psychologist, Zhuanglin (1989) highlighted that, it was generally believed that male and female are born with different linguistic advantages, such as, female learn to speak earlier than male, and female learn a foreign language faster and better than male.

Language learning styles refer to cognitive variations in learning a second language. It is about an individuals' preferred way of processing, that is, of perceiving, conceptualizing, organizing, and recalling information

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related to language learning. According to psychologist, Cornett (1983) the language learning styles are the overall patterns that give general direction to learning behavior. Psychologist, Brown (2000) states that unlike factors of age, aptitude, and motivation, its role in explaining why some L2 learners are more successful than others has not been well established, it involves a complex (and as yet poorly understood) interaction with specific L2 social and learning contexts. He also argued that the choice of learning strategies is strongly influenced by the nature of their motivation, cognitive style, and personality, as well as by specific contexts of use and opportunities for learning.

There are individual differences found in an individual but it identifies differences in social, cognitive, cultural, and linguistic dimensions. These dimensions determine the extent of the individual differences that are significant in identifying the individual differences in the children.

It was once thought that all children acquire language in pretty much the same way (Lenneberg, 1964). Although some children develop a little quicker than others, the stages of development and strategies used to acquire language are nearly similar. Psychologist, Nelson (1973) has mentioned two different strategies for acquiring first language; (1) referential strategy, and (2) expressive strategy. She asserts that most children approach language using a *referential strategy.* That is, they refer to aspects of their immediate environment. In contrast, some children use *expressive strategy* in which they emphasize social interaction.

In referential strategy, children seem to regard language as a process of naming objects whereas expressive children are believed to have more diverse vocabularies such as social routines which are learnt holistically as units. They can also utter whole sentences rather than putting words together one by one and then making sentences.

The differences might have linguistic, social, cognitive, and cultural dimension. Languages differ in what is easier and what harder to learn and master. Psychologist, Slobin (1985) distinguished two sources of complexity for learning: conceptual and formal complexity.

Conceptual complexity belongs to the complexity of the ideas being expressed in language; therefore, formal complexity refers to the forms different concepts get. For example, the concept of plural may take different forms in different languages. Although no one language appears to be easier to learn and master, there are some forms which are easier to learn than in other languages. Children growing up in that language find that aspect of language easier and therefore, learn it much sooner than children of other languages in different age.

Most of the scholars believe that the way children learn language follows a specific pattern and is inherently systematic in its nature. It is definite

that children must be exposed to some language in order to start acquisition, but how that exposure and later interaction occur is to some extent variable. The evidence made by children who have grown up in the wild and isolated children those who have grown up with extremely limited human contact proved the importance of language input and child exposure to language.

Factors such as age, aptitude, motivation, learning and personality determine differences among children.

Psychologist, Bond (2002), in her research on successful language learners, is more accurate in stating the factors that may aid one's language learning and draws more detailed perspective: (1) age, (2) exposure to foreign language in infancy, (3) immersion, (4) intelligence, (5) personality, (6) attitude and motivation, (7) relationship between first and target language, (8) sensory style, the study on *Reflections on English Language Teaching*, ZhengdongGan and Todesco (1978) noted that adult good language learners appeared to use five significant strategies: (a) taking an active approach to the task of language learning, (b) recognizing and exploiting the systematic nature of language, (c) using the language they were learning for communication and interaction, (d) managing their own affective difficulties with language learning, and (e) monitoring their language learning performance. Such early good language learner research aims at unearthing 'the secrets of such learners, with the implicit assumption that if these secrets became more widely known, they could be shared with or transplanted to less successful language learners' (Oxford & Lee, 2008, p. 306).

Check Your Progress

1. What are the factors which influence the choice of language strategies?
2. State the chief cause of individual differences.
3. What are the two main strategies for acquiring first language?

11.3 DEVELOPMENT OF VOCABULARY OF LANGUAGE

Vocabulary is the word count that an individual tends to grasp over the years. Vocabulary is central to English language teaching because without sufficient vocabulary students cannot understand others or express their own ideas. Psychologist, Wilkins (1972) wrote that '. . . while without grammar very little can be conveyed, without vocabulary nothing can be conveyed' (pp. 111–112). As Schmitt (2010) noted, 'learners carry around dictionaries and

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not grammar books' (p. 4). Teaching vocabulary helps students understand and communicate with others in English.

Nation (2001) stated that meaning encompasses the way that form and meaning work together, in other words, the concept and what items it refers to, and the associations that come to mind when people think about a specific word or expression.

Vocabulary development is a vital part of each students' life. It affects his thoughts, actions, aspirations, and often his or her success. There are many ways of building vocabulary among children and one of the best ways for children to build their vocabulary skills is through the method of drill and practice, i.e. repetition of the vocabulary. That means that they see the words repeatedly in a variety of contexts to help them practice using the word, reading the word, and even spelling the word, until they are able to memorize and apply the word in meaningful situations.

Early language and communication skills are crucial for children's success in school and beyond. Language and communication skills include the ability to understand others (i.e., receptive language) and express oneself (i.e., expressive language) using words, gestures, or facial expressions. Children who develop strong language and communication skills are more likely to arrive at school ready to learn. The children also are less likely to have difficulties learning to read and are more likely to have higher levels of achievement in school. Vocabulary teaching activities also benefits for literacy development among children as identifying sounds in words promotes the development of decoding skills and identifying the meaning of words which helps in reading comprehension.

When learning the meaning of a word, most learners may find it quite difficult, word meaning, the fixed meaning assumption, and the fuzzy meaning assumption. The fixed meaning assumption claims that for every word there exists a basic meaning, and when learners acquire the basic meaning of a word, the core of the word is acquired. Unlike the fixed meaning viewpoint, the fuzzy meaning viewpoint argues that word cannot have a fixed meaning (Aitchison 2003: 41-52). Students learn some of their vocabulary when their teacher 'teaches' new words directly in the classroom, for example, using explanation, demonstration and even translation. It is also known that students learn some of their vocabulary indirectly through incidental encounters with words, for example, by inferring the meaning of a new word from the context. Unfortunately, little empirical evidence exists about the relative contributions of direct and indirect vocabulary learning. As learners get to know the vocabulary items in greater depth, the closer they move towards productive knowledge. Research (e.g. Oxford, 1990) suggests that language learning strategies (LLSs) influence the outcome of language learning (e.g. Gu and Johnson, 1996; Gu, 2010), and that VLS use, specifically, can enhance vocabulary learning generally (e.g. Schmitt, 1997). There are a number of

parental language factors that may contribute to vocabulary learning in young dual language learners. For example, the structural hypothesis of language acquisition suggests that parent input that is slightly more complex than the child's language output promotes growth in child language (Cross, 1977; Weistuch& Brown, 1987; Yoder & Warren, 1993). Learning strategies are, defined by psychologists, Chamot and Kupper (1989) as 'techniques which students use to comprehend, store, and remember information and skills'.

Vocabulary has been gradually recognized as crucial to language use in which insufficient vocabulary knowledge of the learners led to difficulties in second language learning. There are many ways of developing vocabulary among children that are practiced by teachers and school authorities. There are many literary and co-curricular activities that are organized by the school teachers to enhance the vocabulary of the children. These help to diagnose the problems encountered by children for adequate minimum number of vocabulary expected by children.

Classroom strategies to Help develop Vocabulary

There are various strategies that can be practiced for developing vocabulary among children. These strategies help to enhance the vocabulary in children. Some of the techniques that can be considered for enhancing the vocabulary among children are as follows:

1. Collect key words from each subject which need either pre-teaching or reinforcing.
2. Present the class with a strategy for learning new words. This can be achieved by using a simple diagram containing various questions to focus on the meanings and sounds of words. The more this strategy is used in the classroom, the more it will become an independent word learning strategy for the pupil.
3. Make abstract language visual/concrete where possible. For example, for the words hard/soft-encourage feeling the objects and sorting them according to texture.
4. Use additional questions to support word storage. Ask the pupil to use the word in a sentence- when talking, perhaps in partner work.
5. Encourage the pupil to think of alternative words in everyday activities.
6. Give the pupil, plenty of opportunities to use the new word in real life situations. Model the word and continue discussing it where possible to securely anchor it in their minds.
7. Give the pupil time to think of the word they want to use, let them know 'It's ok, I'm still listening.'
8. Praise the pupil if they manage to find the word by themselves, for example, 'good thinking'

9. Give students proper logic and reasoning behind the spellings and word formation

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11.4 PROMOTING LANGUAGE SKILLS

There are basic four language skills that are of paramount importance. These are listening, speaking, reading and writing. These skills should be promoted among children so that there is a comprehensive development of language among children. Children need to be given practice in developing the language skills. There are many activities or teaching strategies through which teachers should promote language skills, such as conducting role play, rewriting the sentences, language games and motivation for children's development of language. These skills are related to each other as listening skill affects speaking skill. There are various strategies that can be practiced for developing language skills such as teachers can conduct language games, pronunciation drill in classrooms. As all the four skills are inter-related to each other, it is observed that when one skill is enhanced it leads to another skill development in an individual. There are various methods and strategies that teacher uses to develop the language skills of the child. These techniques are as follows:

1. Incorporating a communicative approach of teaching in classroom.
2. Encourage all children to participate in language related activities.
3. Boost self-confidence of the child so that the child is able to speak, write and understand the language in a set pattern.
4. Draft language games for children that focus on developing the four language skills of the child.
5. Understand that promoting the language skills enhances the socio-emotional development of the child.
6. These language skills helps in effective communication, interaction and daily activities.
7. These activities help in establishing an emotional connection with the teachers and peers because of equal opportunities provided to them in classroom for showcasing their confidence in language skills.

11.4.1 Speech Problems in Childhood

There are various speech problems observed in children that inhibits their speech. Owing to the various causes, there are different forms of speech problems. These are briefly described as follows:

1 . **Stuttering:** In stuttering, the child pronounces the same letter repeatedly. Around 2 to 3 years of age, it is very common for children to stutter at the beginning of a sentence. This normal stuttering can take

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the form of repeating the first sound or syllable in a word or the first word in a sentence. It is more likely to happen when a child is tired, excited, or in a competitive situation, such as trying to express herself better or faster than her peers.

2. **Lisping:** Lisping is another common articulation problem which a young child faces when they are learning to talk. In this, the child finds it difficult to pronounce certain letters and words. The main cause is the continuity of the infantile mode of speech. Preschoolers typically make substitutions of an easy sound for one that is more challenging for them to make, such as 'th' for 's,' causing them to say 'thand' for 'sand'. So there are many mispronunciations that occur in children because of speech deformities.
3. **Lengthy pauses**: Another speech imperfection is the appearance of long pauses between words or thoughts in children. This is a sign that a child is groping for the correct word or thinking about how to structure her next sentence.
4. **Slurring**: Slurring is caused by running words together during speech in individuals. The speech of speech interferes with distinct pronunciation. This disables the child to pronounce correctly. These can be caused by defect in vocal organs inherited in birth which are very difficult to cure. There are other many reasons that inhibit this, that can be cured. There are many therapies that are conducted for rectifying the speech problems among children that help to overcome the difficulties faced by the child in the speech related problems in his or her development.

Check Your Progress

4. What are the various techniques for developing language skills?
5. State the main cause of lisping.
6. What are the advantages of vocabulary teaching activities?

11.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The factors which influence the choice of learning strategies are motivation, cognitive style, and personality, as well as by specific contexts of use and opportunities for learning.
2. The chief cause of individual differences is heredity and an individual's inherit various physical traits such as face with its features, colour of eyes and hair, type of skin and size of hands, colour blindness and

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tendency to certain diseases , mental traits like intelligence, abstract thinking and aptitude.

3. The two different strategies for acquiring first language are referential strategy and expressive strategy.
4. The various techniques for developing language skills are as follows:
   (a) Incorporating a communicative approach of teaching in classroom.
   (b) Encourage all children to participate in language related activities.
   (c) Boost self-confidence of the child so that the child is able to speak, write and understand the language in a set pattern.
   (d) Draft language games for children that focus on developing the four language skills of the child.
5. The main cause of lisping is the continuity of the infantile mode of speech. Preschoolers typically make substitutions of an easy sound for one that is more challenging for them to make, such as 'th' for 's,» causing them to say 'thand' for 'sand'.
6. Vocabulary teaching activities also benefits for literacy development among children as identifying sounds in words promotes the development of decoding skills and identifying the meaning of words which helps in reading comprehension. The children also are less likely to have difficulties learning to read and are more likely to have higher levels of achievement in school.

11.6 SUMMARY

- The chief cause of individual differences is heredity and an individual's inherit various physical traits such as face with its features, colour of eyes and hair, type of skin and size of hands, colour blindness and tendency to certain diseases , mental traits like intelligence, abstract thinking and aptitude.
- Environment significantly influences individual differences among children. Owing to the environment, changes in a child's environment are reflected in the changes in his or her personality.
- Individuals of different castes and races exhibit very marked differences among individuals. There is a wide effect of caste and race on the personality of the individual because of the cultural influence.
- Individuals who are below the average in intelligence and mental age find much difficulty in learning and the average intelligent persons can learn quickly.
- It has been observed that emotional stability of the individual is differently affected by physical, mental and environmental factors.

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- Individual differences are caused by economic condition of the parents and the education of the children.
- There are various other causes such as interests, aptitudes, achievements, sentiments, character, and educational and home background lead to individual differences.
- One of the important objectives of modern education is the complete development of the individual. Individuals have different goals, different interests, different emotional problems and different abilities.
- Teaching plays roles such as guiding, facilitating learning, and encouraging the learner and setting the conditions for learning.
- The role of learner as negotiator—between the self, the learning process, and the object of learning—emerges from and interacts with the role of joint negotiator within the group and within the classroom procedures and activities which the group undertakes.
- Language development has long been associated with motor development, particularly manual gesture.
- There are variations in learning style among children. Continuing our search for the seams and joints of the language processor, it is observed that humans differ from each other due to many biological or conditioned factors (affected by nature) or unconscious forces (affected by past experiences).
- Language learning styles refer to cognitive variations in learning a second language. It is about an individuals' preferred way of processing, that is, of perceiving, conceptualizing, organizing, and recalling information related to language learning.
- Conceptual complexity belongs to the complexity of the ideas being expressed in language; therefore, formal complexity refers to the forms different concepts get.
- Vocabulary is the word count that an individual tends to grasp over the years. Vocabulary is central to English language teaching because without sufficient vocabulary students cannot understand others or express their own ideas.
- Vocabulary development is a vital part of each student's life. It affects his thoughts, actions, aspirations, and often his or her success.
- Language and communication skills include the ability to understand others (i.e., receptive language) and express oneself (i.e., expressive language) using words, gestures, or facial expressions.
- Vocabulary has been gradually recognized as crucial to language use in which insufficient vocabulary knowledge of the learners led to difficulties in second language learning.

- There are basic four language skills that are of paramount importance. These are listening, speaking, reading and writing.
- In stuttering, the child pronounces the same letter repeatedly. Around 2 to 3 years of age, it is very common for children to stutter at the beginning of a sentence.
- Lisping is another common articulation problem which a young child faces when they are learning to talk.
- Another speech imperfection is the appearance of long pauses between words or thoughts in children.
- Slurring is caused by running words together during speech in individuals. The speech of speech interferes with distinct pronunciation.

11.7 KEY WORDS

- **Language learning styles**: It refers to cognitive variations in learning a second language. It is about an individuals' preferred way of processing, that is, of perceiving, conceptualizing, organizing, and recalling information related to language learning.
- **Language and communication skills**: It refers to skills which includes the ability to understand others (i.e., receptive language) and express oneself (i.e., expressive language) using words, gestures, or facial expressions.
- **Stuttering**: It refers to a speech problem in which the child pronounces the same letter repeatedly. It can take the form of repeating the first sound or syllable in a word or the first word in a sentence.
- **Vocabulary**: It refers to the word count that an individual tends to grasp over the years.

11.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. Write a short note on the meaning of individual differences.
2. State one of the main objectives of modern education.
3. How does learning style vary in children?
4. State the premise of referential strategies.
5. Why is vocabulary central to English language?
6. How can vocabulary be improved?

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Long Answer Questions

1. Explain the causes of individual differences.
2. Discuss the role of teacher in developing language skills in children.
3. Anlayse the factors which aids in learning language.
4. Discuss the ways of developing vocabulary in children.

11.9 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

BLOCK - IV
SOCIO-EMOTIONAL DEVELOPMENT

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UNIT 12 EMOTIONAL DEVELOPMENT

Structure

12.0 Introduction
12.1 Objectives
12.2 Meaning of Emotion
12.2.1 Nature and Characteristics of Emotions
12.2.2 Development of Emotions
12.3 Emotional Development
12.4 Differentiation of Emotions During the First Two Years
12.5 Answers to Check Your Progress Questions
12.6 Summary
12.7 Key Words
12.8 Self Assessment Questions and Exercises
12.9 Further Readings

12.0 INTRODUCTION

The word emotion is derived from the latin word 'emovere' which means 'to stir up', 'to agitate'. Emotions are the prime motive forces of thought, feeling and conduct in which their continuous control is required. Emotion is associated with mood, temperament, personality, motivation and it requires continuous control. It is essential to know how emotions develop and how they affect personal and social adjustment in life. Emotions play a significant role in guiding and directing our behaviour, personality and overall approach to life.

Emotions play a major role in the development of the child. There should be effort made in regard to the emotional development of the child as this shapes his or her personality. Emotions prepare an individual to face the world and acquire a heightened sense of emotional maturity gradually from childhood to adulthood. Emotional development is a process wherein there is great role of family, teachers, peers and society and large.

In this unit, the meaning of emotion, its types and characteristics have been explained. The concept of emotional development, the factors which influence emotional development and its stages have been analysed. The unit will also discuss the concept of emotional differentiation.

12.1 OBJECTIVES

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

- Discuss the meaning of emotion
- Identify the types and characteristics of emotion
- Interpret the factors which influence emotional development
- Anlayse the stages of emotional development in children
- Explain the concept of emotional differentiation

12.2 MEANING OF EMOTION

We will discuss some of the important definitions of emotion given by renowned psychologists in this section.

Crow and Crow, 'Emotion is an affective experience that accompanies generalized inner adjustment and mental and physiological stirred-up states in the individual and that shows itself in his overt behaviour'(1973,p.83).

Woodworth, 'Emotion is a 'moved' or 'stirred up' state of an organism. It is a stirred-up state of feeling that is the way it appears to the individual himself. It is a disturbed muscular and glandular activity that is the way it appears to an external observer'(1945,p.410).

Charles G Morris, 'Emotion is a complex affective experience that involves diffuse physiological changes and can be expressed overtly in characteristic behaviour patterns' (1979, p.386).

Positive and Negative Emotions

Positive emotions are those that include pleasant emotions such as happiness, amusement, affection and curiosity which are important and helpful in the normal development of an individual's development. In positive emotions, an attempt is to include positivity is expressed. They arise by underlying desirefor enjoyment and unity. The examples of positive emotions are interest, enthusiasm, boredom, laughter, empathy, action and curiosity.

Negative emotions include unpleasant emotions such as jealousy, anger, and fear which are harmful to an individual's development. In negative emotions, an attempt or intention to exclude positivity is expressed and arise by an underlying fear of the unknown, a fear of the actions of others, and a need tocontrol them or stop them to avoid being harassed. The examples of negative emotions are apathy, grief, fear, hatred, shame, blame, regret, resentment, anger, hostility.

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12.2.1 Nature and Characteristics of Emotions

The following are the main characteristics of emotions:

1. Emotions bring physiological changes. The emotions when expressed involves many physical and psychological changes that observable in our overt behaviour such as flow of tears, pulse rate and fleeing from the situation.
2. Emotions are associated with instincts or biological drives as they are expressed when the basic need is satisfied or challenged.
3. Emotions are the product of perceptions as they are expressed out of our perceptions of proper stimuli that starts the emotional experience.
4. Emotions are expressed in relation to concrete objects or situations and they start on the situations experienced or viewing any concrete objects.
5. Emotions are present at all stages of development and can be aroused in young as well as in old. They develop with every stage and can arise on various situations.
6. Emotions are extremely individualistic and differ from person to person and they arise in an individual internally according to own perceptions and instincts, and so differ from one to another.
7. Emotions rise abruptly in different situations spontaneously but slowly die down.
8. Emotions differ from person to person and are separate for every individual and each individual imbibes different emotions at different times.
9. Emotions are frequent and they arise at rapid intervals according to the situations encountered and the feelings are generated at regular intervals.

Impact of Emotions on Child's Personal and Social Adjustments

Emotions leave a strong impact on children. Some of the impacts are enlisted as follows:

- Emotions aid in developing and shaping child's attitude on life and relationships.
- These affect the psychological outlook of children that they experience at home, school, and neighbourhood.
- Emotions affect the social relationships and interactions.
- Emotions affect the intellectual activities.
- Emotions act as self-evaluation.

12.2.2 Development of Emotions

Emotional development covers three aspects which are as follows:

1. Since birth of an individual, there is a gradual birth of different emotions in him or her.
2. There are changes in the conditions or nature of the stimuli that arouse child's emotions.
3. There are changes in the mannerisms in which a child expresses his or her emotions.

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The ability to respond emotionally is present in the newborn infant and the first sign of emotional behaviour is general excitement activity due to strong stimulation which is reflected in the newborn's mass activity.

There are several factors that influence emotional development of children:

1. **Family Environment:** Family does influence the emotional development of the child. The environment that the family provides to the child determines his or her emotional set up. If the children have a positive experience in the family, they will develop positivity and stability in their behaviour and express their feelings in a balanced manner.
2. **School Environment:** The experiences that children receive in schools influence their emotions and their process of emotional development. School teachers and all school authorities play an important role in developing the emotional attitude of the child. The activities, opportunities, initiatives and the overall ethos of the school provide emotional development among them.
3. **Neighbourhood, Community and Society's Environment:** The community is developed with different cultures, customs and values related to the set community. This culture and stereotypes of the community affects the child and his emotional development. Attitude and values that the child sees in his or her neighbourhood and society influences child's thinking, beliefs and behaviour.
4. **Peer Group Relations and Social Development:** The peers at all ages do exert influence on the psychology of the child. The activities, beliefs and emotional pattern of the peers and the relationships with peers affect the emotional development of the child. Negative experiences with the peers provide negative inter-personal relationships skills.
5. **Health and Physical Development:** Physically healthy child is stable as he is comfortable with his or her physical being. A healthy mind rests in a healthy body, and so a healthy physical body is very much required for developing emotional front of the child. The health and

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the physical development in an individual influences the emotional development of the individual.

6. **Intelligence:** Wisdom and intelligence in a child determines the emotional stability as an intelligent person will only take decisions which will not bring negative repercussions or will not lead to problem situations. Therefore, a person should develop intelligence by solving problems in a critical way and communicating in an effective manner.

Check Your Progress

1. What are positive emotions?
2. How does intelligence in developing emotions in a child?
3. What are the main aspects of emotions?

12.3 EMOTIONAL DEVELOPMENT

Emotional development is the process where the child develops different set of emotions in his or her personality. It is the ability of the child to recognize, express, and manage feelings at different stages of life and to develop empathy for others. The development of these emotions, which include both positive and negative emotions, is largely affected by relationships that the child has with family-parents, siblings, and peers.

There are various stages of emotional development from infancy to adulthood**.** Infants between the ages of six and ten weeks begin to show emotion with a smile accompanied by actions and sounds that represent pleasure and joy in the child. Around three to four months infants begin to laugh, which demonstrates that they can recognize strangeness in actions that deviate from the norm of emotionally developing. From six to twelve months infants can begin to express emotions, such as fear, disgust, anger, and sadness. This stage indicates that the infants are able to show to their guardians that they are experiencing discomfort or displeasure and need more attention. During a child's second year, the infants begin to express different emotions such as shame, embarrassment, and pride, which are learned emotions based on their culture. As they acquire language and learn to verbalize their feelings, they can express their emotions of affection, distress, pain, and fatigue. The ability to recognize, identify and define their emotions of the child at this stage tries to control emotional expression in ways that are consistent with cultural expectations of his or her immediate surroundings. Children learn to self-regulate their emotions to be able to cope with difficult situations. Usually by age two, children also begin to acquire the complex emotional sense and response of empathy with others by understanding others' emotional situations and understanding their side of perspectives.

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By the age of three, children begin to understand society's cultural rules regarding expression of emotions such as anger and aggression and the way these emotions are to be controlled in the presence of adults. This difference is the result of differing consequences of their behaviour with adults or with peers.

Children acquire the ability to show and alter their emotional expressions by around age four**.** At this stage, they can display external expressions that do not necessary match their internal feelings and are sometimes different. This ability requires complex skills of understanding the need to alter their expression without showing the true emotions undergoing his or her mindset, realizing the perception of another, knowing that their expression does not need to match their actual feelings, and having the motivation and control to mask their true feelings convincingly and without any discomfort. As children develop, the things that develop their emotional responses change gradually; as do the strategies they use to manage them in different situations.

Young children's emotions are mainly made up of physical reactions (for example, heart racing behaviours). As they grow, children develop the ability to recognise feelings and their emotions are also increasingly influenced by their thinking and imagination. Moreover, they become more aware of their own feelings and are able to recognize and understand other people's emotions and situations in a better way. The experience of emotion includes several components:

- Physical responses (for example, heart rate, breathing, hormone levels)
- Feelings that children recognise and learn to name
- Thoughts and judgements associated with feelings
- Action signals

Children according to their families and culture, learn different ways of expressing emotion as there are different sets of beliefs with different family customs and set of rules followed. Some families and cultures encourage children to express a range of emotions while other families encourage children not to display certain emotions, such as anger or pride. These differences also influence the child's thinking pattern and the ways children learn to regulate their emotions.

There are various influences which inculcate children to express emotions that can be both through words and behaviour pattern. These influences include:

- Values about appropriate and inappropriate ways of expressing emotions and the belief pattern that children learn from parents, guardians and school.
- Efficient way of handling and meeting children's emotional needs.

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- Child's temperaments.
- Emotional behaviour that children have learned through observation or experience.
- The extent to which families and children are under various kinds of stress that influence the child's emotional instincts.

The ability to discriminate this information emerges in the first year of life (Flom & Bahrick, 2007) and continues to develop into adulthood (Thomas, De Bellis, Graham, & LaBar, 2007) As children develop through primary school, they are increasingly able to identify emotions (Selman, 1981) and to interpret them within specific social contexts. This enables them to express their own emotions competently in their social environment. Child's developing skills in emotional understanding, includes recognition and appraisal along with the development of competent emotional expression which permits them to navigate the complex social and academic school environment successfully and to develop prosocial behaviours.

Often the classroom can be a confusing and disorientating place for children who are unable to accurately identify emotions or interpret the impact of specific contexts on other people's emotions (Raver, Garner, & Smith-Donald, 2007) and this may result in children displaying externalizing behaviours that disrupt classroom learning.

Emotional Development at Infancy

According to psychologist, Hurlock, 'At birth and shortly afterwards the first sign of emotional behaviour is general excitement to strong stimulation. There are no indications of clearcut, definite emotional patterns that can be recognized and identified as specific emotional states' (1959,p.126). This stage is undifferentiated excitement to any stimulus. This stage gets over in a very short time and is quickly followed by general excitement which gets differentiated into simple responses that suggest pleasure and displeasure. The stimuli that bring pleasant responses such as patting, warmth etc. provide pleasant responses and those that bring unpleasant responses are like sudden loud noise, contact with cold or hot objects.

At the infant stage, the individual displays gratification of needs by eye contact, touch, movement, affection. The infant feels sense of self where individual feels either positive that he or she is cared for and loved or negative that he or she is unlovable and worthless. The behaviour expressed exhibits self-fulfilling prophecy. Infants begin to recognize the emotions of others and use them in reacting to novel situations.

Early Infancy: At the time between six to ten weeks, infant develops a social smile accompanied by other pleasure-indicative of the actions and sounds, which comes in response to adult smiles and interactions. Over a period of

time, infant becomes aware of their environment, smile occurs in response to wider variety of contexts. Around 3-4 months of infancy, laughter begins.

Later Infancy: Infant during this period begins to express disgust, fear and anger. Anger is expressed by crying which is a frequent emotion expressed by infant. Fear emerges during this stage as children compare an unfamiliar event with what they know. Anxiety is expressed in infants from seven to 12 months. 'During the first two months, pleasure and displeasure come in response to 'physical' stimulation. By the third month, pleasure is aroused by 'psychological' stimulation as shown in the baby's smile in response to human face. Slightly later, displeasure can be aroused by psychological as well as physical stimuli as may be seen in the baby's reaction to being left alone' (Hulock, E.BB.1959,p.127).

Before 6 months, the pleasant and unpleasant responses generate emotional behaviour and when the infant completes 6 months, the negative emotions lead and gradually emotions such as fear, disgust, jealousy, anger are distinguishable. At the age of 10 and 12 months, the positive emotions such as affection, sympathy, enjoyment enter the infant's emotional behaviour. According to study conducted by psychologist, Bridges in 1931, up to 2 years almost all the positive as well as negative emotions gets distinguishable.

Emotional Development during Childhood

During childhood, the emotions get linked with new experiences with the outside world, peer relationships, school environment and other environmental factors that influence his or her behaviour. There is a remarkable observable change in the emotional behaviour in childhood stage as the child is able to express his feelings through the use of language. The child is able to understand that he or she has to react and display his or her emotions timely and does not have to show his or her emotions every time and his or her intelligence plays a proper role in exercising check over emotional outbursts and extreme behaviour. So at this stage, the child is able to control his or her emotions.

Emotional Development during Adolescence

At the adolescent stage, the emotions are very extreme and create stress and pro-activeness. The child faces emotional disturbances and tend to be aggressive as well as violent. The emotions fluctuate frequently and exhibit inconsistency in every situation. This stage is characterized by intensive storm and stress and emotionally the child needs training for channelizing the emotions properly. There a different set of emotions displayed in the child and the child is not able to control his or her emotions. The main task of adolescent emotional development is forming a realistic and coherent sense of identity (Erikson, 1968). Adolescents need to learn the emotional skills necessary to manage stress and be sensitive and effective in relating to others,

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skills grouped under the term 'emotional intelligence' (Goleman 1994). Part of the challenge of emotional development is for adolescents to understand the strong influence that emotions can have on subjective experience, in perception and judgement (Larson, Clore & Wood 1999).

At adolescence stage, the emotional balance is disturbed as the child experiences the violent and extreme current of emotional experiences. This stage is described as the stage of stress and storm. The child is not able to control or balance their emotions and exhibit extreme behaviour. Emotions are not consistent at this stage and fluctuate very frequently within them

Children at this stage require constant moral support and guidance. They require training on managing emotions and proper channelization of emotional energy. For most adolescents, establishing sense of autonomy, or independence, is as important a part of the emotional transition out of childhood as is establishing a sense identity.

Emotional Development in Adulthood

At this stage, the emotional development reaches to emotional maturity, where the individual is able to exercise control over emotions, display and possesses reasoning and decision-making skills. The individual is balanced to understand the controlling of emotions at various situations.

Psychologist Erikson described two fundamental themes that dominate adulthood-affection and work. According to him, during early adulthood individuals enter Intimacy versus Isolation Stage. Moreover, they display more mature behaviour and have the capability of managing their emotions. At adulthood, the individuals display good conflict resolution skills and have a sense of personal responsibility for the outcomes of decisions taken and their outcomes. An emotional mature individual possesses the intellectual powers such as thinking, reasoning.

Check Your Progress

4. What are the main components of emotion?
5. What are the two fundamental themes which dominate adulthood?

12.4 DIFFERENTIATION OF EMOTIONS DURING THE FIRST TWO YEARS

Emotion differentiation (ED) refers to the precision with which people can identify and distinguish their emotions and has been associated with well-being in adults.

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At the infancy stage, the first sign of emotional behaviour is general excitement due to strong stimulation. At around three months, the general excitement becomesdifferentiated between distress and delight. This shows a state of distress. The child gets delighted and makes pleasant sound by cooing and gurgling when she or he is being rocked, patted and played with. By about two years, the child starts displaying other emotions like fear, disgust, anger, jealously, joy, elation, affection for adults and children. By the age of five, one would be able to distinguish the expressions of shame, anxiety, tear, disgust, disappointment, anger, envy, jealousy, joy, elation and so on. As they grow older, these emotional responsesbecome less diffuse, random and undifferentiated.

Bridges described infant emotions as originating in a state of diffuse excitement that first differentiates to generate delight and distress and then more distinct emotion states such as fear, anger, elation, and affection. There arevariations in frequency, intensity and duration of the different emotions and in the age at which they appear. Variations may be due in part to children's physicalstate, intellectual state and environmental conditions. The difference may be due to the influence of maturation and learning on emotionaldevelopment. Individual differences are inevitable because of maturation and learning. Regardless of individual differences, however, certain characteristic features of children's emotions make them different from those of adults.

Katherine Bridges' Theory

According to this theory, emotions develop as baby's age:

Newborns: One emotion only

3 Months: Distress and delight

6 Months: Distress differentiates into fear, disgust, and anger

12 Months: Delight differentiates into elation and affection

2 Years: Jealousy develops from distress; joy develops from delight

According to Bridges, there are no differentiated emotional responses in new born infants, but only have uncoordinated skeletal visceral responses, to all emotional stimuli. There are a series of emotions that begin to differentiate as the organism develops and matures signifying general distress and delight by about 6th month, distress developing into definite anger, distress and fear. Through such a process various emotions appear as the child advances in years. By about 5 years of age, the responses such as envy, anxiety and shame appear.

Emotional expressions and emotions in a child vary from those in an adult in various ways. Apart from role of maturation, the learning process also plays a very great part in the development of emotions. As the child grows,

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he or she learns a great deal with regard to its emotional life and the way of expressions as he or she learns to experience new emotions. Moreover, the child learns to experience emotions such as anger and fear towards new stimuli and learns new ways of expressing emotions. Emotional maturity develops in the course of changes in child's emotional life. At this stage, there is proper development of emotions in the individuals.

Teachers and parents have an immense role in developing emotions among children. They should devise opportunities to talk with children often and teach them about how emotions help children to become more aware of their own emotions as well as those of others. Encouraging children to feel comfortable with their emotions and providing them with practice in talking about their feelings helps children to further develop ways to manage their emotions. Children learn about their emotions and how to express them appropriately by observing others, especially parents, guardians and school staff. Showing children the ways you understand and manage emotions helps children learn.

Check Your Progress

6. How psychologist Bridges defined infant emotions?
7. What are the ways in which a teacher can develop emotions in children?

12.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Positive emotions are those that include pleasant emotions such as happiness, amusement, affection and curiosity which are important and helpful in the normal development of an individual's development.
2. Wisdom and intelligence in a child determines the emotional stability as an intelligent person will only take decisions which will not bring negative repercussions or will not lead to problem situations. Therefore, a person should develop intelligence by solving problems in a critical way and communicating in an effective manner.
3. The following are the three main aspects of emotions:
   (a) Since birth of an individual, there is a gradual birth of different emotions in him or her.
   (b) There are changes in the conditions or nature of the stimuli that arouse child's emotions.
   (c) There are changes in the mannerisms in which a child expresses his or her emotions.

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4. The main components of emotion are as follows:
   (a) Physical responses (for example, heart rate, breathing, hormone levels)
   (b) Feelings that children recognise and learn to name
   (c) Thoughts and judgements associated with feelings
   (d) Action signals
5. The two fundamental themes which dominate adulthood are affection and work. At adulthood, the individuals display good conflict resolution skills and have a sense of personal responsibility for the outcomes of decisions taken and their outcomes.
6. Bridges has defined infant emotions as originating in a state of diffuse excitement that first differentiates to generate delight and distress and then more distinct emotion states such as fear, anger, elation, and affection.
7. The teacher can develop emotions in children in the following ways:
   (a) A teacher should devise opportunities to talk with children often and teach them about how emotions help children to become more aware of their own emotions as well as those of others.
   (b) Encouraging children to feel comfortable with their emotions and providing them with practice in talking about their feelings helps children to further develop ways to manage their emotions.

12.6 SUMMARY

- Positive emotions are those that include pleasant emotions such as happiness, amusement, affection and curiosity which are important and helpful in the normal development of an individual's development.
- Negative emotions include unpleasant emotions such as jealousy, anger, and fear which are harmful to an individual's development.
- Emotions are associated with instincts or biological drives as they are expressed when the basic need is satisfied or challenged.
- Emotions are the product of perceptions as they are expressed out of our perceptions of proper stimuli that starts the emotional experience.
- Emotions differ from person to person and are separate for every individual and each individual imbibes different emotions at different times.
- The ability to respond emotionally is present in the newborn infant and the first sign of emotional behaviour is general excitement activity due to strong stimulation which is reflected in the newborn's mass activity.

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- The environment that the family provides to the child determines his or her emotional set up. If the children have a positive experience in the family, they will develop positivity and stability in their behaviour and express their feelings in a balanced manner.
- The experiences that children receive in schools influence their emotions and their process of emotional development.
- The activities, beliefs and emotional pattern of the peers and the relationships with peers affect the emotional development of the child.
- Emotional development is the process where the child develops different set of emotions in his or her personality.
- The development of emotions, which include both positive and negative emotions, is largely affected by relationships that the child has with family-parents, siblings, and peers.
- Children acquire the ability to show and alter their emotional expressions by around age four**.** At this stage, they can display external expressions that do not necessary match their internal feelings and are sometimes different.
- Children according to their families and culture, learn different ways of expressing emotion as there are different sets of beliefs with different family customs and set of rules followed.
- At the time between six to ten weeks, infant develops a social smile accompanied by other pleasure-indicative of the actions and sounds, which comes in response to adult smiles and interactions.
- During childhood, the emotions get linked with new experiences with the outside world, peer relationships, school environment and other environmental factors that influence his or her behaviour.
- At the adolescent stage, the emotions are very extreme and create stress and pro-activeness. The child faces emotional disturbances and tends to be aggressive as well as violent.
- Emotion differentiation (ED) refers to the precision with which people can identify and distinguish their emotions and has been associated with well-being in adults.
- Emotional expressions and emotions in a child vary from those in an adult in various ways. Apart from role of maturation, the learning process also plays a very great part in the development of emotions.
- Teachers and parents have an immense role in developing emotions among children. They should devise opportunities to talk with children

often and teach them about how emotions help children to become more aware of their own emotions as well as those of others.

12.7 KEY WORDS

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- **Emotion**: It refers to a complex affective experience that involves diffuse physiological changes and can be expressed overtly in characteristic behaviour patterns.
- **Emotional development**: It refers to the process where the child develops different set of emotions in his or her personality.
- **Emotion differentiation**: It refers to the precision with which people can identify and distinguish their emotions and has been associated with well-being in adults.
- **Infant emotions**: It refers to emotion that first differentiates to generate delight and distress and then more distinct emotion states such as fear, anger, elation, and affection.

12.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What is the first sign of emotional development in children?
2. How are positive emotions different from negative emotions?
3. What are the main impacts of emotions on children?
4. List the factors which influence emotional development.
5. How do emotions develop in adolescents?

Long Answer Questions

1. Explain the characteristics of emotions.
2. Discuss the factors which influence emotional development in children.
3. Explain the process of emotional development in infants.
4. 'In adulthood, the emotional development reaches to emotional maturity'. Elucidate the statement.
5. Discuss the concept of emotional differentiation.

12.9 FURTHER READINGS

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Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 13 SOCIO-EMOTIONAL DEVELOPMENT

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Structure

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13.0 INTRODUCTION

Socio-emotional development includes the child's experience, expression, and management of emotions and the ability to establish positive and rewarding relationships with others. The core features of emotional development includes the ability to identify and understand one's own feelings, to accurately read and comprehend emotional states in others, to manage strong emotions and their expression in a constructive manner, to regulate one's own behaviour, to develop empathy for others, and to establish and maintain relationships. (National Scientific Council on the Developing Child 2004, 2)

Thus, social emotional development refers to the capability of the child from birth through childhood to form close and secure adult and peer relationships and express emotions in socially and culturally appropriate ways in the context of family, community, and culture. It is indeed very important to develop the socio-emotional aspects of the child as this determines his or her overall personality for lifelong.

Social and emotional development is complex and includes many different areas of growth- temperament: the way a young child acts and responds to different situations, caregivers, and stranger, attachment: the emotional bond between a child and caregiver, social skills or social competence: the ability to get along with other people and emotion regulation: the ability of a child to control his or her emotions and reactions to the environment.

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In this unit, the meaning, importance and aspects of social-economic development have been explained. The factors which affect the socio-economic development and the process of development of socio-economic in children have been analysed in detail. The unit will also explain the ways in which teachers in promoting healthy social-economic development in children.

13.1 OBJECTIVES

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

- Discuss the meaning of socio-emotional development
- Analyse the main aspects of socio-emotional development
- Explain the importance of socio-emotional development
- Identify the factors which affect socio-emotional development
- Explain the development of socio-emotional development in infants and children
- Analyse the role of teachers in building socio-emotional development

13.2 MEANING OF SOCIO-EMOTIONAL DEVELOPMENT

Socio-emotional development is the child's ability to understand his or her own along with other's feelings, strengths, the ability to control emotions and exhibit interpersonal skills such as trust, confidence, and affection, self-pride and respect and effective communication.

- It is the ability to identify oneself.
- It is the ability to understand others' feelings.
- It is the ability to control their emotions in various situations.
- It is the ability to manage strong and extreme emotions
- It is the ability to regulate their own behaviour
- It is the ability to exhibit self-respect and stability
- It is the ability to establish, maintain and sustain relationships

Socio-emotional development in children focus on their ability of controlling their emotions and building their interpersonal skills. Social relationships are build with the experiences they share with self, family members, peers, teachers, neighbours and siblings. The interaction with self and getting aware about one's identity, strengths and weaknesses is an important aspect of the emotional development in an individual.

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Social-emotional development is a child's ability to understand the feelings of others, control their own feelings and behaviours, and get along with peers. A child's socio-emotional development determines his or her ability to understand oneself and his or her immediate surroundings. It is what drives an individual to communicate, connect with others, and more importantly, helps resolve conflicts, gain confidence and reach goals.

A child's positive relationship with trusting and caring adults is the key to successful social and emotional development. Social and emotional development involves the acquisition of a set of skills. A child's social-emotional development provides them with a sense of who they are in the world; how they learn, and helps them establish quality relationships with others. It is what drives an individual to communicate, connect with others, and more importantly, helps resolve conflicts, gain confidence and reach goals. Building a strong social-emotional foundation as a child will help the child thrive and obtain happiness in life. Moreover, they will be better equipped to handle stress and persevere through difficult times in their lives as an adult. Those children who are gradually given specific training in social-emotional skills are taught how to solve their own problems independently, to negotiate, and to make compromises. These skills must be taught in a proactive, focused way, not in the heat of the moment after a problem occurred. Children need to practice using these skills when they are calm. Then when a problem does occur, the adult can support children in putting their skills into action. (Schwartz 2007). Positive social and emotional development is important. This development influences a child's self-confidence, empathy, the ability to develop meaningful and lasting friendships and partnerships, and a sense of importance and value to those around him or her. Children's social and emotional development also influences all other areas of development. Social and emotional development means how children start to understand who they are, what they are feeling and what to expect when interacting with others. It is the development of being able to:

- Form and sustain positive relationships.
- Experience, manage and express emotions.
- Explore and engage with the environment.

Observation plays a vital role in how young children learn new things. If the child sees you sharing, expressing gratitude, being helpful, and sharing feelings, your child will have a good solid understanding of how to interact with other people outside the home. Parents can also boost empathy and build emotional intelligence by encouraging their children to think about how other people feel. Early social and emotional development establishes a psychological foundation for emerging competence across developmental domains and is based on children's relationships with those who care for

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them. Social and emotional health is vulnerable to adversity, which affects many young children's social and emotional health is just as important as their physical health, and affects their capacity to develop and potential to lead a fulfilling life. Children enter primary school; they are faced with increased demands for well-regulated and goal-directed activities such as complying with school rules and following group instructions. This requires the child to apply self-regulation skills, and inhibit behaviours that might impact their ability to participate in class. Children are also required to make friends by initiating and sustaining positive relationships or even display interpersonal problem solving skills when conflict arises. Parents can gain an understanding of their child's social-emotional strengths and weakness by observing their child's development at home or by working collaboratively with their child's preschool teacher.

The home environment provides the first step into emotional and social development as children learn to manage strong emotions such as anger or fear, and navigate around interpersonal relationships such as siblings or other extended family members.

The preschool environment provides a supportive setting where children have opportunities to practice emotional regulation and social skills with their peers. Social or emotional competence of young children is an important predictor of success in school. There is solid evidence that children need to achieve minimal social or emotional competence by about the age of 6 (Katz and McClellan, 1997) to have a positive experience in the early elementary grades. The basic competencies of social or emotional development help not only in the preschool and kindergarten years but also in the long-term—affecting lifelong trajectories related to schooling and employment. Healthy social-emotional development for infants and toddlers unfolds in an interpersonal context, namely that of positive ongoing relationships with familiar, nurturing adults.

Social or emotional development includes the following aspects:

- Identify and understand one's feelings
- Accurately read and comprehend emotional states in others
- Manage strong emotions and their expression in a constructive manner
- Regulate one's behaviour
- Develop empathy for others
- Establish and sustain relationships

Check Your Progress

1. What are the aspects of social-economic development?
2. State the premise of social-economic development.

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13.3 IMPORTANCE OF SOCIO-EMOTIONAL DEVELOPMENT

It is very important to understand the importance of socio-emotional development as this is seen in every area of a child's life that affects the personality of the child. A child is believed to have a strong foundation of his or her personality for later development if he or she can identify, manage personal feelings, understand others' feelings and needs, and interact positively with others. Differences in social and emotional development result from a child's inborn temperament, cultural influences, disabilities, behaviours modeled by adults, the level of security felt in a child's relationships with adults, and the opportunities provided for social interaction. Positive social and emotional development in the early years provides a critical foundation for lifelong development and learning. Social development refers to a child's ability to create and sustain meaningful relationships with adults and other children. Emotional development is a child's ability to express, recognize, and manage his or her emotions, as well as respond appropriately to others' emotions. Both social and emotional development is important for young children's mental health. Social development begins in infancy, when infants respond to the familiar voice, smell and touch of the important people in their lives. When these first social experiences are rewarding, they support the next stage in social development. Toddlers learn to share, cooperate, take turns, compromise and negotiate through relationships which they observe. A preschooler who looks up expectantly toward a parent when encountering an unexpected event depends on the adult's emotions for guidance about how to respond. An adult's emotional response to a situation greatly influences the young child's feelings about the situation. With adult support, preschool-age children learn more complex relationship skills including how to express personal views and opinions, how to discuss and resolve conflicts, and how to enjoy relationships. Infant emotions are evoked by physical conditions: hunger, discomfort, temperature or fatigue. An infant's emotional repertoire is basic, ranging from cooing to crying, and is shaped by temperament. Preschoolers' emotions are more tied to their psychological condition i.e. how they interpret their experiences, what they think others are doing or thinking, and expectations about future events. Preschoolers are capable of anticipating

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and talking about their emotions and those of others, and can begin to use strategies to manage their feelings. By kindergarten, children have become capable of emotions like pride, shame, guilt and embarrassment. Preschoolers can feel empathy for other people and experience more subtle blends of feelings than they did as infants and toddlers. Social-emotional well-being is the process of developing capacity in an individual to experience, regulate and express emotions; form close and secure relationships; explore the environment; and learn. The core features of emotional development include the ability to identify and understand one's own feelings, to accurately read and comprehend emotional states in others, to manage strong emotions and their expression in a constructive manner, to regulate one's own behaviour, to develop empathy for others, and to establish and maintain relationships. (National Scientific Council on the Developing Child 2004, 2).

If the child builds a strong social-emotional foundation, it helps the child to thrive and obtain happiness in life as they will be better equipped to handle stress and persevere through difficult times in their lives as an adult.

Caregivers promote healthy development by working to support social emotional wellness in all young children, and make every effort to prevent the occurrence or escalation of social emotional problems in children at-risk, identifying and working to remediate problems that surface, and, when necessary, referring children and their families to appropriate services. (Adapted with permission from ZERO to THREE's definition of infant mental health, 2001).

Socio-emotional development among individuals is important because of the following factors:

- It helps an individual to identify emotions in oneself.
- It helps an individual to connect with others.
- It helps an individual to resolve personal and social conflicts.
- It helps an individual to develop confidence among children.
- It helps an individual to develop emotional stability.
- It helps an individual to develop inter-personal skills.
- It helps an individual to develop empathy among individuals.
- It helps the individual to control emotions or regulate them.
- It helps in developing correct decision-making skills among individuals.
- It helps in developing problem-solving skills among individuals.

13.3.1 Factors Affecting Socio-Emotional Development of Children

There are several factors that affect the socio-emotional development of children at different stages of development:

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1. **Home Environment:** The child's first lessons are derived from his or her family members. The environment that the family provides leads to socially and emotionally develop the child.
2. **Environment Influence:** The people around the child also determine his or her socio-emotional development. The child tries to imitate the behaviour, responses that people display around him or her.
3. **Health and Physical Development:** Health and the overall physical development of an individual affects one's socio-emotional development as the illnesses emotionally upset and put stress on the social and emotional setup of an individual.
4. **Intelligence:** The individual's intelligence exercises control according to the situation and make proper use of one's emotions. At every stage, the intelligence of the child guides an individual's social and emotional features.
5. **School Environment:** The individual's school environment affects one's social and emotional mind set. Conducive school environment provides balanced socio-emotional development of children as a good school acts as an effective platform for balancing the social emotional aspects of an individual.
6. **Peer group Relationships:** The peer groups of an individual influence the social and emotional development of the child. The temperaments and social relations with peers, friendliness affects the emotional temperament of the individual and the social relations that an individual creates and maintains.
7. **Media:** Various media agencies such as newspapers, magazines, television and promotional advertisements influence the socio-emotional development of an individual**.**
8. **Community:** Child in a particular community exhibits a specific code of social behaviour and tries to develop his or her emotions as witnessed by him or her. Every community has a specific set of characteristics, cultural pattern, traditions and social codes; these have an impact on the way child socially develops with specific perceptions and school of thought and also develop emotions parallel to the ones witnessed by him or her.

Check Your Progress

3. What is social development?
4. What are the core features of economic development?

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13.4 SOCIO-EMOTIONAL DEVELOPMENT AT VARIOUS STAGES: INTERACTING WITH INFANTS AND CHILDREN

We will in this section discuss the stages of socio-economic development.

At Childhood Stage

At the childhood stage, there is lot that a child can learn from various influencing factors determining his or her socio-emotional behaviour. In childhood, there is an expansion of child's social awareness and building up of emotional temperament. As the child progresses from 2 to 6 years, he or she slowly shifts his identity from unsocial to distinctive social. The child tries to build up his social contacts and relationships.

The child's emotions are mainly determined by the home environment where he or she witnesses emotional behaviour of parents and family members. Moreover the school environment and the newly made social relationships matters. If the child is exposed to vast opportunities to build social contacts through play-way methods and their social activities, the child tends to be extrovert.

In infancy, the emotions are expressed through crying, yelling and laughing and as the child gradually progresses towards childhood, the child tries to express his or her behaviour through the use of language and actions. Moreover slowly, he or she tries to control and manage his or her emotions and tries to understand.

From Infancy to Six Months

The child at this stage displays the following actions of socio-emotional development:

- Identifies the one who cares the most
- Communicates and expresses emotions through face, gestures, crying
- Responds to interaction with carers

From Six months to 2 years

The child at this stage displays the following actions of socio-emotional development:

- Gradually tries to understand the emotions of others
- Tries to use language to communicate, describe emotions
- Shows different emotions including anger and affection
- Tries to be independent and do tasks themselves

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From 2 years to 3 years

- Growing capacity to recognize own emotions as well as of others
- Growing need for independence
- Develops friendships with others

From 3 years to 6 years

- Awareness about oneself
- Better understanding of emotions of others
- Tries to accept the social rules
- Tries to build relationships with friends
- Resentment against the authority of elders

At Adolescent stage

During adolescence loyalty becomes very much pronounced and adolescence is in a mood to sacrifice their selfish interests for the greater cause of the group, society and nation. Adolescence stage is often marked with increased friendly relationships. Emotional behaviour of the adolescence dominates his or her social characteristics and qualities. There is too much diversity in the adolescents regarding their social interests. Adolescents must be trained to control their emotions and achieve a mental balance and stability which will lead to individual happiness and social efficiency. The social relationships that an adolescent makes are often too attached and have a great influence on them. The emotions are very high at this stage as it is very difficult for an adolescent to exercise control over his or her emotions. Therefore, there is wide fluctuation of emotions among adolescents. 'There is a tide which begins to rise in the veins of youth at the age of eleven or twelve. It is called by the name of adolescence. If that tide can be taken at the flood, and a new voyage begun in the strength and along the flow of its current, we think that it will move on to fortune' (Ross J.S.,1951p.153).

Moreover there are specific areas of interests that adolescents cater to, under the influence of peers. The culture, socio-economic background of peers, all has impact on the adolescents. They tend to choose their friends of the same level or of higher socio-economic status, common interests, social pressure and mutual interdependence on each other. Therefore, at adolescence stage, there is a wide variety of social relationships that an individual can make and there are also wide fluctuations in their emotional behaviour that determine their behaviour.

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13.4.1 Causes of Unsocial Behaviour

There are two causes for developing unsocial tendencies:

1. Bad physical health i.e. lacks of proper nutrition, diseases and incapacities affects children's social behaviour.
2. Bad environment i.e. unfavourable conditions at home, non-helpful attitude of parents, Child's inability to understand the change in the environment and lack of proper nutrition.

Role of School and Teachers in Socio-Emotional Development of Children

A family influence the child's social and emotional development and the process of development largely depends on the emotional well-being of his or her parents. Families or Parents that experienced positive life experiences are better equipped to be emotionally stable, available and responsive to a young child than are the parents who have not or experienced some negative responses. When parents and young children are emotionally tuned in to each other, caregivers can more easily read the child's emotional cues and respond appropriately to his or her needs. This responsive relationship between the young child and parents supports healthy development in communication, cognition, social-emotional competence, and moral understanding through school and teachers, socio-emotional development of children is impacted and has a great influence on their behaviour. Children can learn to cope with their feelings and emotions much more effectively through social games and play. When preschoolers, kids, and teens play social-emotional activities and social development games they are less likely to explode into tantrums and fits of rage. They will still get frustrated and angry, but the intensity and duration will decrease over time as they learn effective self-regulation skills and coping strategies to manage their anger. Social or Emotional Development in an individual includes self-management skills, social awareness and interpersonal skills, and decision-making skills and responsible behaviours. The following suggestions should be kept in regard by teachers in developing social and emotional development of children:

- Teachers should make students aware of their own strengths and weaknesses.
- Teachers should create opportunities for children to get social exposure.
- Teachers should take care of the individual differences of students in classroom in regard to their social behaviour.
- Teachers should give equal opportunities to students so that all students should be able to develop their self-confidence.

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- Children should be given proper counseling at social occasions and guidance at every time.
- Children should be provided with morals and spiritual sessions.
- Schools should have provisions for recreation activities such as yoga and meditation.
- Teachers should encourage students to participate in various diverse activities so that they develop social contacts.
- Teachers should try to make students calm their extreme behaviour.
- Teachers should not have biased behaviour that affects the emotional development of the children.
- Teachers should understand the reasons of emotional disturbances of children and provide them with solutions.
- Schools should facilitate in developing the life skills of students.
- Schools should provide adequate facilities for enhancing physical development of children.
- Teachers should serve as a role model to the students whom the students should try to imitate their cordial social and emotional composed behaviour.
- Children should be made aware of the results of their social behaviour.
- Be a role model.
- Listen and validate your child's emotional experience.
- Be aware of your nonverbal communication.
- Set clear boundaries on inappropriate behaviours.
- Provide opportunities for practice.
- Focus on the positive.
- Play helps children practice their communication skills as they negotiate roles and appreciate others' feelings. They learn to share, wait their turn, and handle conflicts while playing with others.
- Teachers have a large role to play in the development of social or emotional competence. A positive foundation in these skills will serve children well throughout their lifespan, helping each child to accept and benefit from education and experience in every domain.

Check Your Progress

5. How are emotions expressed in infancy?
6. What are the main causes of development of unsocial tendencies?

13.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

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1. The following are the aspects of social-economic development:
   (a) Identify and understand one's feelings
   (b) Accurately read and comprehend emotional states in others
   (c) Manage strong emotions and their expression in a constructive manner
   (d) Regulate one's behaviour
   (e) Develop empathy for others
   (f) Establish and sustain relationships
2. Social-emotional development is a child's ability to understand the feelings of others, control their own feelings and behaviours, and get along with peers.
3. Social development refers to a child's ability to create and sustain meaningful relationships with adults and other children.
4. The core features of emotional development include the ability to identify and understand one's own feelings, to accurately read and comprehend emotional states in others, to manage strong emotions and their expression in a constructive manner, to regulate one's own behaviour, to develop empathy for others, and to establish and maintain relationships.
5. In infancy, the emotions are expressed through crying, yelling and laughing and as the child gradually progresses towards childhood, the child tries to express his or her behaviour through the use of language and actions.
6. The main causes of development of unsocial tendencies are as follows:
   (a) Bad physical health i.e. lacks of proper nutrition, diseases and incapacities affects children's social behaviour.
   (b) Bad environment i.e. unfavourable conditions at home, non-helpful attitude of parents, Child's inability to understand the change in the environment and lack of proper nutrition.

13.6 SUMMARY

- Socio-emotional development is the child's ability to understand his or her own along with other's feelings, strengths, the ability to control emotions and exhibit interpersonal skills such as trust, confidence, and affection, self-pride and respect and effective communication.

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- Social relationships are build with the experiences they share with self, family members, peers, teachers, neighbours and siblings.
- Social-emotional development is a child's ability to understand the feelings of others, control their own feelings and behaviours, and get along with peers.
- A child's socio-emotional development determines his or her ability to understand oneself and his or her immediate surroundings.
- A child's positive relationship with trusting and caring adults is the key to successful social and emotional development.
- A child's social-emotional development provides them with a sense of who they are in the world; how they learn, and helps them establish quality relationships with others.
- Social and emotional development means how children start to understand who they are, what they are feeling and what to expect when interacting with others.
- Social and emotional health is vulnerable to adversity, which affects many young children's social and emotional health is just as important as their physical health, and affects their capacity to develop and potential to lead a fulfilling life.
- The home environment provides the first step into emotional and social development as children learn to manage strong emotions such as anger or fear, and navigate around interpersonal relationships such as siblings or other extended family members.
- The preschool environment provides a supportive setting where children have opportunities to practice emotional regulation and social skills with their peers.
- It is very important to understand the importance of socio-emotional development as this is seen in every area of a child's life that affects the personality of the child.
- Social development refers to a child's ability to create and sustain meaningful relationships with adults and other children.
- Emotional development is a child's ability to express, recognize, and manage his or her emotions, as well as respond appropriately to others' emotions.
- Social-emotional well-being is the process of developing capacity in an individual to experience, regulate and express emotions; form close and secure relationships; explore the environment; and learn.
- If the child builds a strong social-emotional foundation, it helps the child to thrive and obtain happiness in life as they will be better equipped to handle stress and persevere through difficult times in their lives as an adult.

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- At the childhood stage, there is lot that a child can learn from various influencing factors determining his or her socio-emotional behaviour.
- The child's emotions are mainly determined by the home environment where he or she witnesses emotional behaviour of parents and family members.
- During adolescence loyalty becomes very much pronounced and adolescence is in a mood to sacrifice their selfish interests for the greater cause of the group, society and nation.
- A family influence the child's social and emotional development and the process of development is largely depends on the emotional well-being of his or her parents.
- Social or Emotional Development in an individual includes self-management skills, social awareness and interpersonal skills, and decision-making skills and responsible behaviours.

13.7 KEY WORDS

- **Emotional development**: It refers to a child's ability to express, recognize, and manage his or her emotions, as well as respond appropriately to others' emotions. Both social and emotional development is important for young children's mental health.
- **Socio-emotional development**: It refers to the child's ability to understand his or her own along with other's feelings, strengths, the ability to control emotions and exhibit interpersonal skills such as trust, confidence, and affection, self-pride and respect and effective communication.
- **Social-emotional well-being**: It refers to the process of developing capacity in an individual to experience, regulate and express emotions; form close and secure relationships; explore the environment; and learn.
- **Social relationships**: It refers to relationships which are build with the experiences which the child share with self, family members, peers, teachers, neighbours and siblings.

13.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. How does observation play an important role in social-emotional development?

2. What is the role of preschool in developing social-emotional relationships among children?
3. How is socio-emotional development vulnerable to adversity?
4. Why is it important for a child to build a strong social-emotional foundation?
5. Write a short note on the role of family in building socio-emotional relations.

Long Answer Questions

1. Explain the importance of social-emotional development in children.
2. How does social-emotional development influence other areas of development? Discuss in detail.
3. Identify the factors which affect social-emotional development in children.
4. Discuss the steps which a teacher can take to promote socio-emotional development?
5. Why is it important for adolescents to control their emotions? Explain.

13.9 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 14 DEVELOPMENT OF ATTACHMENT

NOTES

Structure

14.0 Introduction
14.1 Objectives
14.2 Development of Attachment: Learning to Relate
14.2.1 Types of Attachment
14.3 Trust-Temper Tantrums
14.4 Answers to Check Your Progress Questions
14.5 Summary
14.6 Key Words
14.7 Self Assessment Questions and Exercises
14.8 Further Readings

14.0 INTRODUCTION

Attachment is a deep and enduring emotional bond that connects one person to another across time and space. Children can develop increasing independence when they are securely attached and this can help in exploring their environment with confidence that they can respond back to a carer who will respond to their needs. Therefore, securely attached children will develop good self-esteem and confidence.

There are major four types of attachment that are found in the individuals. The type of attachment depends upon how the care giver had responded to the feelings of infant. Home environment plays a major role in determining the type of attachment. Therefore, it is very important to understand the type of attachment that an individual possess as this determines the overall personality of the child. Attachment also influences students' school success. This is true in case of students' attachment to their parents, as well as to their teachers. Secure attachment is associated with higher grades and standardized test scores compared to insecure attachment because of the confidence that a secure attached child has is not reflected in an insecure attached child.

In this unit, the development of attachment, its characteristics and importance have been explained. The psychological theory of attachment and the main types of attachment have been highlighted. The unit will also discuss the meaning of trust-temper tantrums and the importance of trust in children.

14.1 OBJECTIVES

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

- Discuss the development of attachment in children
- Anlayse the characteristics of attachment
- Explain the psychological theory of attachment
- Anlayse the main types of attachment
- Discuss the concept of trust-temper tantrums

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14.2 DEVELOPMENT OF ATTACHMENT: LEARNING TO RELATE

Attachment is described as a long lasting psychological connection with a meaningful person that causes pleasure while interacting and helps to remain calm in times of stress and problems.

Attachment is one specific aspect of the relationship between a child and a parent with its purpose being to make a child safe, secure and protected. Attachment is where the child uses the primary caregiver as a secure base. The emotional bond that typically forms between infant and caregiver is the means by which the helpless infant gets primary needs met. It then becomes the engine of subsequent social, emotional, and cognitivedevelopment. The early experience of the infant stimulates growth of neuralpathways that will sculpt enduring patterns of response to many people, life events, and things in general. The attachment experience affects personality development, particularly a sense of security, and research shows that it influences the ability to form stable relationships throughout life. The genius of the attachment system is that it provides the infant's first coping system; it sets up in the infant's mind a mental representation of the caregiver. It is so because, it allows an infant to separate from the caregiver without distress and begin to explore the world around her, attachment contains within it the platform for the child's ability to survive independently.

Psychologist, Bowlby (1958) proposed that attachment can be understood within an evolutionary context in that the caregiver provides safety and security for the infant. Attachment is adaptive as it enhances the infant's chance of survival. Parenting for a secure attachment has two themes

1. Providing comfort when needed
2. Offering the freedom to explore when desired

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It is a simple concept, but one that can be complex to manifest in the rush of everyday life.

Psychologist, Maccoby (1980 has described four main characteristics of an attachment. These are as follows:

1. Seeking proximity, the desire to be close to the person to whom you are attached.
2. Separation anxiety, the distress that results from being separated from that person.
3. Pleasure when reunited, relief and observable joy when reunited with them.
4. General orientation of behaviour towards the caregiver, the child's awareness of where the person is, and the reassurance they feel by them being close.

Attachment is an emotional bond between a child and caregiver. The ability to form an attachment is present from birth and plays two important roles for young children. First, it motivates children to stay near a caregiver, which keeps them safe. Second, it allows children to depend on their caregiver as a source of support as they explore their surroundings. Children who do this successfully have what is often called 'secure attachment'. Attachment is the word used to refer to the relationship developed between an infant and a parent or primary caregiver during the first two to three years of life. How this relationship forms is dependent on how a parent responds to a child's needs for care, comfort and security.

The development of a secure attachment is important for many reasons. Some of the reasons are enlisted as follows:

- Promotes a positive relationship between a child and caregiver
- Decreases risk for social and emotional problems later in childhood and adulthood
- Encourages healthy relationships outside the home (for example, child-care providers, friends, other adults)
- Fosters positive, trusting relationships in middle childhood, adolescence, and adulthood.

A child will be able to form one to two strong and positive attachment relationships with parents, and then have a supportive web of secondary attachments with siblings, aunts and uncles, grandparents, close friends and caregivers. This is the most positive environment for a young child. Children who experienced a secure attachment at one year are better able to explore on their own than are insecure infants (Waters, Whippman, and Sroufe, 1979). Preschool children who are secure demonstrate better social skills and school adjustment than do their insecure peers (Sroufe, Carlson, and Schulman, 1993).

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Elementary school children who are secure are significantly more accepted by their peers and have more friendships and are less lonely than are less secure children (Kerns, Klepac, and Cole, 1996). The attachment security a child feels throughout his or her early years has been associated with that youngster's later ability to pay attention, focus, and learn in school. Children with secure attachment histories earn higher grades and are more goal oriented and cooperative than are students with insecure attachment histories (Crittenden, 1992; Jacobsen and Hofmann, 1997).

Secure attachment is also created when the mother holds or cuddles her infant and toddler in ways that are comforting. The mother reflects the infant's behaviours and responds in ways the child enjoys. By *attachment*, we mean the relationship formed between the infant and the primary caregiver. A primary caregiver is the person, usually the mother, with whom the infant most frequently interacts. Through bonding with this caregiver, a child develops expectations about the extent to which he or she can acquire and maintain secure relationships, as well as beliefs about others' trustworthiness in relationships. Attachment to a protective caregiver helps infants to regulate their negative emotions in times of stress and distress and to explore the environment, even if it contains somewhat frightening stimuli. Attachment, a major developmental milestone in the child's life, remains an important issue throughout the lifespan. Attachment, the affective bond of infant to parent, plays a pivotal role in the regulation of stress in times of distress, anxiety or illness. Human beings are born with the innate bias to become attached to a protective caregiver. But infants develop different kinds of attachment relationships: some infants become securely attached to their parent, and others find themselves in an insecure attachment relationship. These individual differences are not genetically determined but are rooted in interactions with the social environment during the first few years of life. Sensitive or insensitive parenting plays a key role in the emergence of secure or insecure attachments, as has been documented in twin studies and experimental intervention studies. Several key factors can affect the quality of a child's attachment. These can include the child's temperament (more active and outgoing) the context of the situation (stranger present, familiar room) early history (traumatic experience) and other things. However, the way in which a parent responds to and interacts with a young child is the key factor in how an attachment develops. Attachment is not a characteristic of either the child or the parent, it is a characteristic of the relationship. The parent's sensitivity to the needs of the child is a major determinant in whether a secure or insecure attachment will develop. It has been found that the parent's ability to provide a secure attachment will be heavily influenced by the quality of care that they received during the first two or three years of their own life. Attachment bonds are extremely powerful and can yield great benefits or the inverse. Throughout one's life, attachment bonds are

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extremely powerful, and like any powerful system the benefits can be very great when the system is optimal, well balanced and working smoothly, but very painful if the system is sub-optimal, out of balance or broken. The nature of the attachment bond is passed on to the next generation. There is an inter-generational transmission of attachment styles. If the care that the parents received when they were children was sensitive and well balanced and provided them with a secure attachment, they are likely to provide similar parenting for their own children. Attachment behaviours must exist and be reciprocated for the infant to survive physically and psychically (Bowlby, 1958). Attachment is dynamic, complex, and ever evolving. It has both an internal, psychic organization and an external, observable manifestation. Attachment is crucial to children's psychological welfare and forms the basis of personality development and socialization (Bowlby 1988). Children who can regulate their own emotions and responses are more popular, have fewer behavioural problems, are more emotionally stable, have fewer infectious illnesses and achieve more academically in schools (Gottman et al 2007).

14.2.1 Types of Attachment

The psychological theory of attachment was developed by a British psychologist, John Bowlby (and expanded upon by Mary Ainsworth—see next section), a psychoanalyst who researched the effects of separation between infants and their parents (Fraley, 2010). The theory of attachment was first proposed by John Bowlby who described it as a 'lasting psychological connectedness between human beings' (1988). He considered that children needed to develop a secure attachment with their main caregiver in their early years. This theory has been revised to acknowledge that multiple attachments can occur with other adults throughout the lifespan, although early experiences may continue to have an impact. Bowlby suspected that the extreme behaviours infants would engage in to avoid separation or when reconnecting with a physically separated parent, behaviours such as crying, screaming, and clinging, were actually evolutionary mechanisms—behaviours that were reinforced through natural selection and enhanced the child's chances of survival.

These attachment behaviours are instinctive responses to the perceived threat of losing the survival advantages that accompany being cared for and attended to by the primary caregiver(s). Since the infants who engaged in these behaviours were more likely to survive, the instincts were naturally selected and reinforced over generations.

These behaviours make up what Bowlby termed an 'attachment behavioural system', the system that guides us in our patterns and habits of forming and maintaining relationships (Fraley, 2010).

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It makes intuitive sense that a child's attachment style is largely a function of the caregiving the child receives in his or her early years; those who received support and love from their caregivers are likely to be secure, while those who experienced inconsistency or negligence from their caregivers are likely to feel more anxietysurrounding their relationship with their parents.

However, attachment theory takes it one step further, applying what we know about attachment in children to relationships we engage in as adults. These relationships (particularly intimate and or romantic relationships) are also directly related to our attachment styles as children and the care we received from our primary caregivers (Firestone, 2013).

There are four types of infant-parent attachment: three 'organized' types (secure, avoidant and resistant) and one 'disorganized' type. The quality of attachment that an infant develops with a specific caregiver is largely determined by the caregiver's response to the infant when the infant's attachment system is 'activated' (for example, when the infant's feelings of safety and security are threatened, such as when he or she is ill, physically hurt or emotionally upset; particularly, frightened).

There are four main types of attachment:

1. Secure Attachment
2. Avoidant Attachment
3. Ambivalent Attachment
4. Disorganized Attachment

These categories of relationship were developed by Mary Ainsworth, an American-Canadian developmental psychologist after John Bowlby.

A child's attachment style basically gradually develops on many factors, the major one is based on the child's perception or understanding of the caregiver's reliability in providing comfort, support and security and the past experiences that he or she had. In the following section, we will discuss the types of attachment in detail.

1. Secure attachment Secure attachment is often seen in children where at home, the parents are most of the time emotionally available, perceptive, and responsive to infant's needs and mental states. The internal working model of these infants is likely to be one that expects that their needs will be known and met, that they will be attuned to and emotionally regulated, and that they can freely explore their environment in safety.

A secure attachment in the child ensures that a person will feel both acknowledged, understood and always protected. Interestingly, it is not the perfect parenting or even lack of parental skills that determines attachment style. Secure attachments develop when parents can communicate (non-

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verbally) to their children that they are there to protect them. Things that can stop secure attachment from developing include:

- Being mistreated or abused
- Only getting attention when acting out or behaving badly
- Having your needs met infrequently or inconsistently
- Being separated from parents
- During childhood, children who are attached securely to their caregivers
- Prefer being with their parents over others or strangers
- Can separate from their parents without being overly upset
- Look for comfort from their parents when they are afraid
- Are happy to see their parents when they return

Adults who were securely attached to their caregivers as children have a long-term relationship in which they can trust their partner and demonstrate good self-esteem. Not only are they comfortable sharing their feelings, hopes, and dreams with their partners, they are also able to seek support when needed. Secure individuals can support their partners as well and comfort them when they are hurting. A secure attachment helps the individual to build confidence and trust in the goodness of everyone that a person carries throughout his or her daily life. It is the sense of being loved and supported no matter what happens. And when children feel secure, a world of possibilities opens up. Raising a Secure Child is neither a quick read nor a how-to, but instead invites thoughtful reflection. Children who are secure demonstrate greater ability to handle stress and help others handle stress, while children who are insecure are more likely to struggle when stressed, act out in unhealthy ways and be insensitive to others who are stressed. Securely attached children have experienced sensitive and attuned caregiving. They are able to trust and rely on teachers to meet their needs. As a result they feel confident to form meaningful relationships with others, to make the most of learning opportunities, to engage in productive activities, problem-solve and explore the wider world.

2. Avoidant attachment In avoidant attachment, infants did not use their mothers much as a secure base from which to explore. When the mother began to leave the room, the infant might move towards her, but often did not. When the mother returned, the infant acted like she or he was not even there and just continued playing. Characterized by children who avoid or ignore a parent's presence, show little response when parents are close by, display few strong emotional outbursts, and may avoid or ignore a parent's responses toward them.

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At home, the family where the parents are seen to be emotionally unavailable for the child, and also many times imperceptive, unresponsive, and rejecting in almost all situations. Some families who are responsive in many non-emotional interactions, but are very dismissive and non-responsive when the child really emotionally needed the family, but there is no closeness or attachment showed to the children, they tend to be frustrated, or angry. These infants often express random aggression, anxiety and sadness. These children tend to be clingier and demanding in the home then securely attached infants.

The infants then protect themselves from this difficult situation by dissociating from contact with their normal need for connection, and repress their emotions more generally. This is a 'deactivating' strategy with respect to attachment.

This avoidance of intimate relationships is based on childhood events, usually, a situation in which a caregiver was unable or unwilling to parent in a way that would build a secure attachment. In some situations, parents were there physically, but for one reason or another were not able to meet their child›s emotional needs. To get by, the child learns to pretend they do not have emotional needs at all.

This unhealthy style of attachment carries into adulthood and creates a grownup who dismisses the need for love and closeness. These signs are usually present if a person has an avoidant attachment type:

- Uncomfortable with deep feelings and intimate situations
- Set extreme boundaries either emotional or physical
- May hide information from their partners
- Send mixed signals while also disregarding their partner's feelings
- Are non-committal
- Idolize past relationships

Though they may desire relationships and intimacy deep down, avoidant attachment types are usually unable to fulfill their desires because of their internal issues. Avoidant attached children have experienced insensitive, intrusive or rejecting caregiving. They appear to be independent of their teachers and seek to meet their needs on their own as they have not been able to trust or rely on their caregiver. They are task orientated, self-reliant and high achieving in some aspects but are generally socially uncomfortable, exhibit indifference and avoid close relationships

3. Ambivalent attachment In ambivalent attachment, these infants were more alert of the whereabouts of mother while playing. They were very upset when she left the room, immediately went to her upon return and got very clingy. Their behaviour upon reunion alternated between outbursts of anger

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and going limp, and in either case the infant was not soothed by the presence of the caregiver even if the mother was seen to be caring and emotionally available.

In these homes, the mother was inconsistently available for the infant, and when she was available she was often pre-occupied and un-attuned to the infant in her responses. These infants were the most anxious, clingy, and demanding at home.

These infants respond by 'over-activating' their attachment system. Like secure attachment types, people with this type of attachment crave love and intimacy. Unfortunately, they feel doubtful about their self-worth. Because of their internal feelings of insecurity, people with this form of anxious attachment type demand attention. Characterized by children who become anxious and seek parents but then struggle to get away, are reluctant to explore the environment, become upset easily and exhibit frustration with their parents' responses to them. Ambivalent attachment signifies that the children have experienced inconsistent and largely unresponsive caregiving at their homes wherein the family has not developed any attachment. They are easily frustrated and may present as both clingy and rejecting of a teacher as they seek both comfort from but are unable to be comforted by adults. They may present as immature, fussy, helpless, passive or whiney or they may be angry

4. Disorganized attachment Disorganized attachment was not an original classification in this type of attachment, but later studies showed some infants who got disorganized when their mothers left the room, and also expressed disorganized patterns of behaviour on return (move towards mother, then away; freeze; go into a corner). They were not soothed if they made contact with the mother. The final type of insecure attachment is one not based solely on neglect or preoccupation but on intense fear. Parents of children with a disorganized attachment type are usually dealing with trauma themselves. Because of unresolved trauma, pain, or loss, the parent is unable to attach themselves securely to their child.

It is approximated that about eighty percent of abused children have this type of disorganized attachment. Because their primary caregiver's behaviour was often erratic and driven by fear and suppression, adults with this type of attachment never learned to self-soothe themselves because their past is full of pain and loss. They may become aggressive, see the world as unsafe, and have trouble socially. Characterized by children who are not predictable in their behaviour, seem unable to cope easily or be comforted when stressed, and show evidence of fear or confusion around a caregiver.

Signs of disorganized attachment style include:

- A cold attitude when it comes to relationships.
- Antisocial behaviour or lack of remorse.

- Tend to be selfish, controlling, and lack personal responsibility.
- Recreate abusive patterns from their childhood in adult relationships.
- Are at a higher risk for drug and alcohol abuse as well as criminal behaviour.

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Disorganized attached children are usually from neglected, abusive homes where the child is not presented any situations where he or she feels organized and secured. The child exhibits feelings such as confusion in many situations and with people like teachers and think and experience them as frightening or frightened. These children are often, easily distracted, have a strong sense of fear, panic, or helplessness, highly vigilant and may present extreme, unpredictable or distressing behaviour, which adults may find shocking and difficult to manage. Their inner working model of the relationship with others is not functional, and is one where the expected source of soothing is also the source of danger, leaving the mind and state and behaviour of the child very disorganized in almost every situation.

Check Your Progress

1. What are the two main themes related to the concept of attachment?
2. Why is attachment crucial for children's psychological welfare?
3. How does secure attachment develop in children?

14.3 TRUST-TEMPER TANTRUMS

Temper tantrum in children is an intense storm of emotions, which are usually shown through anger, loss, disappointment and deep frustration, in the child. In children particularly infants, this emotional outbreak can lead to crying, screaming, kicking, biting, hitting, throwing things on others and banging the head. Infant tantrums are actually natural behaviours that can be found in them. They usually result from unmet needs, requirements or desires that they need and expect to be approved. Tantrums are more likely to appear in young children because that's when they start to learn that they are separate from their parents and want to seek independence. The child may also struggle with internalizing problems or have externalizing issues with them. Emotion's regulation can also affect future social competence as well as academic performance. During the first two years of your baby's life, 'attachment' is the word used to describe the relationship you have with him. When the child can and has confidence on you and trust you to meet his or her basic needs for food, love, affection and stimulation, the attachment become stronger and he or she learns to trust you and the world around him or her.

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If a child learns early on that expressing his or her feeling and that results in parental anger or punishment, he or she may resort to being compliant or being defiant. Either way, it means the child will not have the opportunity to form proper brain connections to deal with strong emotions. When facing frustrations later in life, he or she may struggle to be assertive or have angry outbursts.

The lack of vocabulary to express themselves also adds to their anger and frustration in children because they are not able to communicate their feelings and this leads to anger and frustration. Temper tantrums then become their outlets and their words. When children are having emotional tantrums, they are telling us that they are in deep emotional pain and they cannot cope on their own. Temper tantrums are not always about trying to control or manipulate parents. For young toddlers, they are not capable of reasoning or manipulating and so they tend to have mostly emotional tantrums when they are upset.

For older ones, it could be a mixed bag of emotions. Older toddlers are still not experts in the emotional regulation, so they can have emotional tantrums, too. Depending on past behaviour and parents' reactions, some children learn to use tantrums as a means to get what they want.

Trust is a lifelong issue for all of us and in children, it starts from infancy itself. The need to repair or have closure to a trust issue is important to face. A healthy attachment is one way to get children through hard times in their lives with less damage to their brain development and therefore to their social-emotional and cognitive development. As the child progresses in age, there are increasing opportunities for uncertainty to develop, but these same situations also offer opportunities for trust to grow in child. As the lives of children become increasingly intertwined with the members of society and family, the possibilities for conflict are intensified. These points of conflict carry with them risks of rejection and harm but, at the same time, they offer opportunities for each partner to demonstrate concern for the relationship and a willingness to take the other's needs into account. If conflict issues are successfully resolved, not only is trust strengthened, but the child also develops greater confidence so that future problems can be solved together. Trust develops as children demonstrate a willingness to sacrifice their own interests in order to take the needs and concerns of others into account. With each successful experience of disclosure or conflict resolution there is further evidence of the partner's commitment to the relationship with others and greater confidence and trust that the relationship will last and grow stronger. Therefore, children's attachment is an important aspect in the growth of their personality during their lifespan.

Check Your Progress

4. How does trust play an important role in attachment process?
5. What is the meaning of temper tantrums for young toddler's?

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14.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The two main themes related to the concept of attachment are as follows:
   (a) Providing comfort when needed
   (b) Offering the freedom to explore when desired
2. Attachment is crucial to children's psychological welfare and forms the basis of personality development and socialization (Bowlby 1988). Children who can regulate their own emotions and responses are more popular, have fewer behavioural problems, are more emotionally stable, have fewer infectious illnesses and achieve more academically in schools.
3. Secure attachments develop in children when parents can communicate (non-verbally) to their children that they are there to protect them.
4. Trust plays an important role in attachment process as it demonstrates a willingness to sacrifice their own interests in order to take the needs and concerns of others into account. With each successful experience of disclosure or conflict resolution there is further evidence of the partner's commitment to the relationship with others and greater confidence and trust that the relationship will last and grow stronger.
5. Temper tantrums for young toddler's means that the children are not capable of reasoning or manipulating and so they tend to have mostly emotional tantrums when they are upset.

14.5 SUMMARY

- Attachment is described as a long lasting psychological connection with a meaningful person that causes pleasure while interacting and helps to remain calm in times of stress and problems.
- Attachment is one specific aspect of the relationship between a child and a parent with its purpose being to make a child safe, secure and protected. Attachment is where the child uses the primary caregiver as a secure base.

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- Psychologist, Bowlby (1958) proposed that attachment can be understood within an evolutionary context in that the caregiver provides safety and security for the infant.
- Attachment is an emotional bond between a child and caregiver. The ability to form an attachment is present from birth and plays two important roles for young children.
- Attachment to a protective caregiver helps infants to regulate their negative emotions in times of stress and distress and to explore the environment, even if it contains somewhat frightening stimuli.
- Attachment, the affective bond of infant to parent, plays a pivotal role in the regulation of stress in times of distress, anxiety or illness.
- Sensitive or insensitive parenting plays a key role in the emergence of secure or insecure attachments, as has been documented in twin studies and experimental intervention studies. Several key factors can affect the quality of a child's attachment.
- Attachment is not a characteristic of either the child or the parent, it is a characteristic of the relationship.
- The psychological theory of attachment was developed by a British psychologist, John Bowlby (and expanded upon by Mary Ainsworth—see next section), a psychoanalyst who researched the effects of separation between infants and their parents (Fraley, 2010).
- The attachment behaviours are instinctive responses to the perceived threat of losing the survival advantages that accompany being cared for and attended to by the primary caregiver(s).
- There are four types of infant-parent attachment: three 'organized' types (secure, avoidant and resistant) and one 'disorganized' type.
- A child's attachment style basically gradually develops on many factors, the major one is based on the child's perception or understanding of the caregiver's reliability in providing comfort, support and security and the past experiences that he or she had.
- Secure attachment is often seen in children where at home, the parents are most of the time emotionally available, perceptive, and responsive to infant's needs and mental states.
- In avoidant attachment, infants did not use their mothers much as a secure base from which to explore.
- In ambivalent attachment, these infants were more alert of the whereabouts of mother while playing. They were very upset when she left the room, immediately went to her upon return and got very clingy.

- Disorganized attached children are usually from neglected, abusive homes where the child is not presented any situations where he or she feels organized and secured.
- Temper tantrum in children is an intense storm of emotions, which are usually shown through anger, loss, disappointment and deep frustration, in the child.
- Infant tantrums are actually natural behaviours that can be found in them. They usually result from unmet needs, requirements or desires that they need and expect to be approved.
- When children are having emotional tantrums, they are telling us that they are in deep emotional pain and they cannot cope on their own.
- Trust is a lifelong issue for all of us and in children, it starts from infancy itself. The need to repair or have closure to a trust issue is important to face.
- Trust develops as children demonstrate a willingness to sacrifice their own interests in order to take the needs and concerns of others into account.

14.6 KEY WORDS

- **Attachment**: It refers a long lasting psychological connection with a meaningful person that causes pleasure while interacting and helps to remain calm in times of stress and problems.
- **Attachment behavioural system**: It refers to the system that guides us in our patterns and habits of forming and maintaining relationships.
- **Secure attachment**: It refers to the attachment which helps the individual to build confidence and trust in the goodness of everyone that a person carries throughout his or her daily life.
- **Temper tantrum**: It refers to an intense storm of emotions, which are usually shown through anger, loss, disappointment and deep frustration, in the child.

14.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are the main characteristics of attachment?
2. What is the main role of attachment?
3. How is the quality of attachment determined?

4. What are the main signs of disorganized attachment?
5. How does a child respond in ambivalent attachment?

Long Answer Questions

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1. Explain the process of development of attachment in children.
2. Discuss the importance of secure attachment in children.
3. Anlayse the psychological theory of attachment.
4. What are the various types of attachment? Discuss any two forms of attachment.
5. 'Temper tantrums are not always about trying to control or manipulate parents'. Elucidate the statement.

14.8 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education.* United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.

UNIT 15 OVERVIEW OF EMOTIONAL EXPRESSIONS OF CHILDREN

Structure

15.0 Introduction
15.1 Objectives
15.2 Emotional Expressions of Children
15.2.1 Types of Emotional Expressions
15.2.2 Ways of Handling
15.3 Answers to Check Your Progress Questions
15.4 Summary
15.5 Key Words
15.6 Self Assessment Questions and Exercises
15.7 Further Readings

15.0 INTRODUCTION

Emotions are defined as mental feeling or affection (for example, pain, desire, hope, etc.) as distinct from cognitions or volitions which exists in human beings. There are numerous emotional expressions that children experience. Role of parents and the school authorities is to encourage them for positive emotions and negate those emotions that harm the development of the child. There are various developmental issues that children cater to from infancy to adulthood.

The collection of emotions determines the psycho-social development of the child. When there are unpleasant emotions that become dominant, they tend to mould the children's outlooks on life unfavourably. This results in less personal and social adjustment and leads the child to tackle in difficult situations.

In this unit, the meaning of emotions, the forms of emotional expressions and its importance have been explained. The unit will also discuss the major forms of emotional expressions in children and the ways to handle emotional expressions.

15.1 OBJECTIVES

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

- Discuss the concept of emotional expressions in children
- Anlayse the importance of emotional expressions in children

- Identify the main types of emotional expressions in children
- Explain the ways of controlling emotional expressions in children

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15.2 EMOTIONAL EXPRESSIONS OF CHILDREN

Emotion has been defined as a 'sudden trouble, transient agitation caused by an acute experience of fear, surprise, joy, etc' (Larousse Dictionary, 1990).

Emotional responses are most readily differentiated in terms of whether they are generally pleasant (positive or integrative; on the one hand, or generally unpleasant).

Specific emotions are sometimes differentiated on the basis of the level of arousal or excitement involved (Tomkins 1962)(for example, interest versus delight); sometimes on the basis of the nature of the individual's behavioural response to the eliciting stimulus (Hebb1946b) (for example, rage, expressed by attack--versus fear, expressed inavoidance or flight); sometimes on the basis of the individual's perception of the circumstances of the situation and his relationship to it (Schachter1964) (for example, jealousy, as a reaction to threatened or actual displacement in a valued relationship with someone else versus humiliation or shame, as a reaction to failure to meet standards or expectations which are highly valued by oneself and by others whose approval and disapproval are important.

Children have different forms of emotional expressions at different situations. According to Bridges, 'a three-month-old infant may show delight and distress, the six month old the emotions of fear, disgust and anger, and a year-old child may show affection and elation. At the age of a year and half, he shows the emotion of jealousy. At the age of two years he is more able than before to show greater elation, anger, disgust and fear'. All emotions play important roles in children's lives through the influence they have on children's personal and social adjustments. Childhood emotions differ from adult's emotions in intensity, in frequency, in permanency, in strength.

Emotional control is the ability to assess emotion-provoking stimuli before responding to them and of learning to express the emotions in socially approved patterns of behaviour. Emotion is indeed a heterogeneous category that encompasses a wide variety of important psychological phenomena. Some emotions are very specific, insofar as they concern a particular person, object, or situation. Others, such as distress, joy, or depression, are very general. The proper development and functioning of emotions allow people to live well and to be happy. Love, respect, and compassion, for example, are the essential emotional ingredients of interpersonal relations and concerns. Emotions motivate moral (as well as immoral) behaviour; play an essential role in creativity and in scientific curiosity. Different emotions will manifest such structures to different extents and in different ways,

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depending on the specific emotion, its type, and the circumstances. After a traumatic event, it is typical for children (and adults) to experience a wide range of emotions, including fearfulness, shock, anger, grief and anxiety. Your children›s behaviours may change because of their response to the event. They may experience trouble sleeping, difficulty with concentrating on school work or changes in appetite. This is normal for everyone and should begin to disappear in a few months. Encourage your children to put their feelings into words by talking about them or journaling. The behavioural expression of emotion also includes conscious and unconscious gestures, postures and mannerisms, and overt behaviour that can be either spontaneous or deliberate. Emotion is not something that is distinct from and somehow overlays an experience; the experience is part of the structure of the emotion itself. The social structures of emotion consist of the ways in which the larger social context determines an emotion's causes, content, modes of expression, and meaning. Emotions are subject to social shaping in their modes of expression in the sense that most expressions, perhaps even those that are more or less hardwired, are subject to local 'display rules', which govern which emotions and which expressions are appropriate in which circumstances. Emotions can be rational in the sense that they can be used to achieve certain basic human goals and aspirations. Getting angry may be an important step in motivating oneself to face obstacles and overcome them. Emotions are the product not only of culture but also of one's behaviour and attitudes over time, one is to a certain extent responsible for them. Emotions can be consciously developed or discouraged by training oneself to react more or less emotionally—or with more of one kind of emotion and less of another—in certain circumstances.

15.2.1 Types of Emotional Expressions

We will in this section discuss some of the types of emotional experiences.

Anger

It is generally opined by psychologists that upto the age of seven years, the child expresses his or her anger when any obstruction is placed in his or her natural activities. A child who expects that he or she will be helped by others but if he or she does not receive, the child shows anger. A three or four year child has very little sense of honour or humiliation, so he may show in any forms his or her anger. According to Bridges, a three year old child fights amongst his or her peers in order to express anger, four or five old child exercises control in expressing anger but complain to the teacher or guardian. Eight to ten year old child is seen discussing the subject in order to express anger, children aged 12 or 13 years first hesitate to express anger and try to conceal it or suppress their emotions.

Anger is caused when the child experiences some interference in child's natural activity or when he or she feels insulted. It is mostly expressed in

children because of anger-provoking stimuli. However, the frequency and intensity of anger varies from child to child. Some children try to control their anger and do not exhibit violent behaviour; on the other hand, some children exhibit violent behaviour and are not able to control their anger in all situations. Children have different reasons for being angry such as interference, blocking of activities, disturbances in their plans and wishes. Impulsive responses are usually called as aggression. These are more common than inhibited expressions which are kept 'bottled'. In such cases children tend to withdraw into themselves and do not speak up.

In case of child showing anger, the parents should deal with him or her sympathetically and with affection. Anger can be a particularly powerful emotion characterized by feelings of hostility, agitation, frustration, and antagonism towards others. Like fear, anger can play a part in your body's fight or flight response. When a threat generates feelings of anger, you may be inclined to fend off the danger and protect yourself. Anger is often displayed in the following ways:

- Facial expressions such as frowning or glaring
- Body language such as taking a strong stance or turning away from someone
- Tone of voice such as speaking gruffly or yelling
- Physiological responses such as sweating or turning red
- Aggressive behaviours such as hitting, kicking, or throwing objects

Distress and Weeping

Weeping may be an effect of distress, anger, fear or jealousy as the emotional tension generated by these emotions is released by flow of tears. According to Bridges, children show three kinds of behaviour when in distress, firstly, call an elder or guardian for help. Secondly, show protest against interference and third, silently express displeasure. These emotions engulf the child in many situations.

Affection or Love

The emotion of affection is seen in infants at the age of 6 or 7 months as he or she shows his or her joy and affection to those who take care of him or her. Children are seen to be affectionate to their parents, home and relations in matter of affection. Feeling of affections should be widened so that children develop a sense of liberal outlook towards others. Affection helps the child to experience a feeling of trust and oneness in him or her. Affection leads the child to understand that social relations are for building unity and a sense of security develops in them. Affection is an emotional reaction towards a person, or a thing. It indicates warm regard, friendliness, sympathy or helpfulness. Affection must be reciprocal; there must be an emotional linkage

between children and significant people in their lives. Affection is shown in an outgoing, striving, approaching kind of behaviour. Infants respond to affection in forms of cuddling by reaching for the child's loved ones. Children may exhibit their affection in verbal expressions. Deprivation of affection may be a result of children's rejection of their parents, friends and teachers.

It is interesting to note that some observations of infants have suggested that early in the second year, when the infant begins to show affectionate behaviour(such as approaching, hugging, kissing and smiling), this behaviour appears to be directed first toward parents or adult caretakers, and shortly thereafter towards other young children (Bridges 1932).

Jealousy or Rivalry

Children compete with one another after the parents/guardians give affection to other children. The feeling of jealousy starts in infants at the age of year and half. Competitive spirit may be found in children because of the diverted attention of guardians to other children and zeal to win. Jealousy is present from the early years. It is more pronounced in the cases of love between the children of the opposite sexes, especially when a child monopolizes the attention of the adult while another fails to do so. Jealousy obstructs the natural speed of development. Infants show their jealousy through weeping. Distress and anger are included in jealousy. This emotion leads the child to give birth to solitude, rivalry and anger. It is important for the parents that jealousy must not be inculcated in children. It is an over growth of anger, giving rise to resentment towards others. Most childhood jealousies are homegrown as they originate in situations that come in home environment. Secondly children may develop jealousies in schools with their peers. The behaviour varies depending on different situations. Mostly children show feeling insecurity and uncertainty and children's responses are mainly direct and aggressive.

Essentially, jealousy can be viewed as an emotional response to what the child perceives as his or her being actually or potentially displaced by someone else in his or her relationship with a special person, such as a parent. Jealousy is an emotion that could discreetly come into your child's life. The feeling could arise from his or her siblings, friends or classmates. A simple thing like a new bicycle for his friend could trigger envy in kid.

Curiosity

Curiosity is mostly experienced by children when they are out in different new situations. Children are interested in everything in their environments and they are curious about their own selves, about people i.e. their clothing, dresses and actions.

Psychologist, Maw and Maw have described the curious child in the following way: 'The child (a) reacts positively to new, strange, incongruous,

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or mysterious elements in his environment by moving toward them, exploring them or manipulating them; (b) exhibits a need or a desire to know more about himself and or his environment; (c) scans his surroundings seeking new experiences; and/or (d) persists in examining and or exploring stimuli in order to know more about them.'

Capitalizing on children's curiosity as a learning motivator is not complicated. Their brains are designed to learn. By providing children with enriching experiences, we give learning potential a helping hand. Our support promotes brain-power so learning pathways become refined and strengthened. As a child's skills increase, offer play materials they can control, manipulate, and make an impact on. Children love figuring out how things work, especially things they can use in play. Blocks, play dough, dolls, puzzles, non-toxic art materials, and interlocking toys all engage children's senses and thinking abilities or engage curiosity with simple, hands-on experiments.

Withdrawn Behaviour of Child

The withdrawn child has low energy, interest, or motivation to do work. He or she is often irritable, rarely expresses joy, and may be depressed. The child will always feel very low or depressed. The child does not build social relationships with anyone and remains in solitude. He or she has very low self confidence and does not have the ability to effectively communicate with others. Childhood social withdrawal has received increased attention over the past decade.

Aggression is defined as 'a forceful action or procedure (such as an unprovoked attack), especially when intended to dominate or master.' Aggression in children can be a symptom of many different underlying problems. Aggression and violence among children and adolescents are of worldwide public health importance. Aggression is a common reason for referrals to child and adolescent mental health services. Aggression results in heightened sense of fear, suppression and rivalry. There are numerous incidents wherein it is seen that children engage in violence and crimes because of the increased aggression in them.

Fear

There are certain fears which a child finds in his or her childhood. These are called as 'typical fears' as these are characteristically found at certain ages. At infancy and babyhood, the most common fears are of loud noises, dark rooms, being alone, pain and strange people and places. Among elder children, the fears are of supernaturalism and on injury and pain. There are variations in the pattern of fear as children's fears reflect variations in their mental and physical development. Older children have fears related to their own self status or identity; they are mostly afraid of failing, being ridiculed or perform actions that are different. This is what is called as individual differences. To

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overcome fear, children try to keep away from a frightening situation. These common fears take place when children are exposed to something in life that they do not understand or feel they cannot control. School children have hospital related fears because of their developmental stage. They are not able to separate reality from the imaginary and their ability to express and cope with their fears is limited. Some children seem to be fearful of almost any new experience. These children require some special parenting approaches because they require preparation and support for new experiences. Fear depends on the surrounding environment of the child and his or her condition. It depends on the psychological and physiological condition of the child to determine how the child will react at time of fear. Fear occurs suddenly and unexpectedly and so the child is not able to accustom to that situation at that particular time. Children respond differently to fear, infants or children around 2 years cry as they call for help. As children get older, they try to not to cry even though their faces express withdrawn behaviour from the feared object. Fear is a powerful emotion that can also play an important role in survival. When you face some sort of danger and experience fear. Fear is the emotional response to an immediate threat.

Spitz (1950) has proposed that the infant›s fear of strangers is essentially triggered by the threat of 'object loss', i.e., the presence of the stranger suggests an imminent separation from mother, so that the basic response is fear of separation.

Shyness

Slyness is a form of express which mostly all children exhibit in their childhood. They tend to shy from the strangers. This emotion is characterized by shrinking from contact with others who are strange or unfamiliar. This is typically a universal reaction to strangers or to familiar people in different attires. They shy as soon as they encounter strange people. There are few children who escape an occasional experience of shyness. Children mostly shy when they are put to new situations such as recitation of poems, meeting guests at home or participate in any school activity. They become shy because of their uncertainty about how others will react to them or will be laughed at. Infants show their shyness in crying, or clinging to a familiar person for protection. On the other hand older children show their shyness by blushing, by showing nervous mannerisms or by talking as little as possible.

Embarrassment

Embarrassment is a type of fear reaction to others where the child experiences this emotion resulting in low self-confidence. This type of emotion is generated by uncertainty about how people will judge one and one's behaviour and personality and not by strangers or new situations. It is very less present in children ranging from 5-6 years. As children grow,

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they experience embarrassment in a heightened sense. This is because they feel exaggeration of their fears of how others will judge them in the future. Moments of humiliation and ego-deflating experiences play an important role in heightening embarrassment. Child tends to have low self-confidence and self-concept as he or she has powerful memories of past embarrassments. Different children react in different styles but mostly children tend to speak out and clarify and justify their behaviour in the hope of dispelling the unfavorable social judgements that may cause them more embarrassment in future.

Worry

Worry is usually described as 'imaginary fear'. Children ace this emotion owing to the uncertainty of their actions in future. It is a normal emotion in childhood and is not seen in infants. This is because there needs to be adequate intellectual development in which the child is able to think and get tensed for his/her actions. Worry becomes more intense and frequent when childhood progresses. As there is more intellectual development, child ceases from worrying because he or she tries to see how illogical some worries are. Common worries that are seen in children are of home, school, friends, relationships and academics. The way children react to worries depends on children's personality patterns. Children who feel inferior and inadequate tend to internalize their worries, thinking about them and exaggeration them out of all proportion. Some children tend to discuss their worries with others or elders and so are better adjusted. Children who feel insecurity often verbalize their fears and win sympathy from others. Mostly children express their worries by their facial expressions too and tend to look worried. As with age, children tend to worry less and look into the rationality of the matters.

Anxiety

Anxiety is an uneasy mental state wherein children anticipate some ill or misfortune. It is reflected among children in the expressions of uneasiness, apprehensions, helplessness, loss of trust and low self-confidence. The mental state of children is uneasiness and frustrated or dejected behaviour. This emotion develops from fear and worry. Anxiety is an imaginary fear that develops after fear. It is mostly found in school going children from fourth grade to adolescents. Adolescents mainly feel anxiety in most situations because of their growing physical and intellectual development and also owing to social adjustments. This lowers the self confidence of children. Children may express their anxiety in behaviours such as depression, nervousness, restless sleeps, quick anger, irritability, unhappiness etc.

Joy and Delight

Joy and delight is a pleasant emotion which every child experiences. There may be variations in the amount and frequency of experiencing joy and

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also in the way of expressing it. Among infants, the joy come with physical healthy, preschool children feel joy activities in which they experience their achievements as well their peers, in older children joy is felt because of physical well-being, play, and successful achievements.

Grief

Grief is a form of distress for children. It is not a common emotion for all children. There may be many reasons for this emotion such as insult from parents, teachers and other adults or a great loss. Children's memories should be faded as to help them divert their attention to something pleasant. Children react differently to grief, such as overt behaviour or inhibited expressions. Overt expressions may involve crying and anguish and inhibited expressions may consist of a general state of apathy where there is loss of interest in things around them.

Stealing

There are a variety of reasons why children steal. For example, a two year old child might take something from another child because, at that age, there is little or no understanding of the concept to sharing. In fact, at age two, groups of children are usually described as being involved in parallel play where there is no real interaction between children. In other words, two-year-olds have no understanding of 'rules' that guide play at a later age. By the time children reach the age of six or seven, they understand rules, regulations and, to some extent, consequences. They may take something from another child or shoplift from a store. Knowing right and wrong, they may try to hide the ill begotten 'goods'. The motivation for this activity can be as simple as testing the limits.

Frustration

Most children go through peaks of frustration between the ages of one and three. They are discovering that there is so much they want to do but cannot or may not. Young children often express their frustration in tantrums. At that point many of them learn the word frustrated, and parents and teachers help them to find compromises and alternatives and to develop at least some degree of patience.

In the preschool years, further sources of frustration emerge: comparisons with peers, new expectations, and observations of older children (especially siblings) and adults. A child may be prone to frustration if he or she has minor delays in some developmental area, if he or she has easily succeeded at many things and does not remember the process of learning them, or if he or she is developing a somewhat perfectionist personality style.

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Bed Wetting

Bed wetting also called nocturnal enuresis is not a behavioural issue which kids can control. It is genetic and often runs in families; if not a parent, then an aunt, uncle, or grandparent likely wet the bed. Although stress can indirectly affect a child's bedwetting, most experts believe it is not the reason a child starts wetting the bed. Although stress does not cause a child to start wetting the bed, behaviour the child engages in when under stress can make bedwetting worse, or make a child who was mostly dry experience wet nights. Sleep deprivation resulting from stress can also cause a child to wet the bed.

15.2.2 Ways of Handling

The following are the ways in which the emotional expressions of children can be looked after:

1. Children should be provided with lot of affection so that they develop a feeling of love for others.
2. Children should be kept away from quarrels and disputes.
3. Children should be engaged in different activities.
4. Children learn through imitation, so the elders should exhibit an ideal behaviour in front of the children.
5. Children should be encouraged to play and enjoy their social relationships.
6. Children should be made respectful towards others' feelings.
7. All demands of children should not be fulfilled.
8. Children should not be encouraged to laugh at others.
9. Parents or guardians should spend quality time with children.
10. Children should be provided good physical and mental health exercises.
11. Children should be trained to control their emotions.
12. Fear should be eliminated from the minds of children.
13. Children should develop a sense of trust to parents or guardians.
14. The guardians should provide social relationship among children and encourage to play with them.
15. Parents or guardians should develop the self-confidence of children.
16. Children should be made aware of their strengths and weaknesses.
17. Children should be discouraged to show their extreme behaviour.
18. Children should be encouraged to participate in social activities.
19. Stubbornness of children should be discouraged.

20. Feeling of sharing should be encouraged among children.
21. Child's own thoughts and feelings should be acknowledged by others.
22. Encourage the child to discuss his or her daily routine activities.
23. Effective communication should be targeted.
24. Encourage a sense of humor in children.
25. Promote self-confidence among children.

Check Your Progress

1. How is anger caused in children?
2. List any three ways in which children's emotions can be controlled?
3. How is anxiety reflected in children?
4. What are overt expressions?
5. State the main reason of anxiety in adolescents.

15.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Anger is caused when the child experiences some interference in child's natural activity or when he or she feels insulted.
2. Children's emotions can be controlled in the following ways:
   (a) Children should be provided with lot of affection so that they develop a feeling of love for others.
   (b) Children should be kept away from quarrels and disputes.
   (c) Children should be engaged in different activities.
3. Anxiety is an uneasy mental state wherein children anticipate some ill or misfortune. It is reflected among children in the expressions of uneasiness, apprehensions, helplessness, loss of trust and low self-confidence.
4. Overt expressions are a form of grief and may involve crying and anguish and inhibited expressions may consist of a general state of apathy where there is loss of interest in things around them.
5. Adolescents mainly feel anxiety in most situations because of their growing physical and intellectual development and also owing to social adjustments.

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15.4 SUMMARY

- Emotional responses are most readily differentiated in terms of whether they are generally pleasant (positive or integrative; on the one hand, or generally unpleasant).
- All emotions play important roles in children's lives through the influence they have on children's personal and social adjustments.
- Childhood emotions differ from adult's emotions in intensity, in frequency, in permanency, in strength.
- Emotional control is the ability to assess emotion-provoking stimuli before responding to them and of learning to express the emotions in socially approved patterns of behaviour.
- Emotion is indeed a heterogeneous category that encompasses a wide variety of important psychological phenomena.
- Emotions motivate moral (as well as immoral) behaviour; play an essential role in creativity and in scientific curiosity.
- The behavioural expression of emotion also includes conscious and unconscious gestures, postures and mannerisms, and overt behaviour that can be either spontaneous or deliberate.
- The social structures of emotion consist of the ways in which the larger social context determines an emotion's causes, content, modes of expression, and meaning.
- It is generally opined by psychologists that upto the age of seven years, the child expresses his or her anger when any obstruction is placed in his or her natural activities.
- Anger is caused when the child experiences some interference in child's natural activity or when he or she feels insulted.
- Impulsive responses are usually called as aggression. These are more common than inhibited expressions which are kept 'bottled'.
- In case of child showing anger, the parents should deal with him or her sympathetically and with affection.
- Weeping may be an effect of distress, anger, fear or jealousy as the emotional tension generated by these emotions is released by flow of tears.
- The emotion of affection is seen in infants at the age of 6 or 7 months as he or she shows his or her joy and affection to those who take care of him or her.
- Affection must be reciprocal; there must be an emotional linkage between children and significant people in their lives.

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- The feeling of jealousy starts in infants at the age of year and half. Competitive spirit may be found in children because of the diverted attention of guardians to other children and zeal to win. Jealousy is present from the early years.
- Curiosity is mostly experienced by children when they are out in different new situations. Children are interested in everything in their environments and they are curious about their own selves, about people i.e. their clothing, dresses and actions.
- Aggression is defined as 'a forceful action or procedure (such as an unprovoked attack), especially when intended to dominate or master.'
- Slyness is a form of express which mostly all children exhibit in their childhood. They tend to shy from the strangers.
- Embarrassment is a type of fear reaction to others where the child experiences this emotion resulting in low self-confidence.
- Worry is usually described as 'imaginary fear'. Children ace this emotion owing to the uncertainty of their actions in future.
- Anxiety is an uneasy mental state wherein children anticipate some ill or misfortune. It is reflected among children in the expressions of uneasiness, apprehensions, helplessness, loss of trust and low self-confidence.
- Joy and delight is a pleasant emotion which every child experiences. There may be variations in the amount and frequency of experiencing joy and also in the way of expressing it.
- Grief is a form of distress for children. It is not a common emotion for all children. There may be many reasons for this emotion such as insult from parents, teachers and other adults or a great loss.
- Most children go through peaks of frustration between the ages of one and three. They are discovering that there is so much they want to do but cannot or may not.
- Bed wetting also called nocturnal enuresis is not a behavioural issue which kids can control. It is genetic and often runs in families; if not a parent, then an aunt, uncle, or grandparent likely wet the bed.

15.5 KEY WORDS

- **Aggression**: It refers to a forceful action or procedure (such as an unprovoked attack), especially when intended to dominate or master.
- **Embarrassment**: It refers to a type of fear reaction to others where the child experiences this emotion resulting in low self-confidence.

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- **Emotional control**: It refers to the ability to assess emotion-provoking stimuli before responding to them and of learning to express the emotions in socially approved patterns of behaviour.
- **Slyness**: It refers to a form of express which mostly all children exhibit in their childhood. They tend to shy from the strangers.

15.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. What are specific emotions?
2. How does emotion play an important role in a child's life?
3. Why is emotion considered as a heterogeneous category?
4. What are the ways in which anger is expressed in children?
5. Write a short note on the importance of affection in children.

Long Answer Questions

1. Discuss the different forms of emotional expressions in children.
2. Anlayse the social structure of emotions.
3. Explain the types of emotional expressions.
4. Interpret the ways in which emotions can be developed in children.

15.7 FURTHER READINGS

Tassoni, Penny. 2002. *Diploma in Child Care and Education*. United Kingdom: Heinemann.

Meggitt, Carolyn, Julia Manning-Morton and Tina Bruce. 2016. *Child Care and Education*, 6th edition. United Kingdom: Hachette.

Hobart, Christine and Jill Frankel. 2002. *A Practical Guide to Child-care and Education Placements*. United Kingdom: Nelson Thornes.

Gupta, M. Sen. 2009. *Early Childhood Care and Education*. New Delhi: PHI Learning Pvt. Ltd.

Hurlock, B. Elizabeth. 1978. *Child Growth and Development*. New York: Tata McGraw-Hill Education.