- **Development is often predictable :** Development psychologists have observed that each developmental phase has certain common traits and characteristics. We have seen that the rate of development for each child is fairly constant. The consequence is that it is possible for us to predict at an early age the range within which the mature development of the child is likely to fall. But all types of development, particularly mental development, cannot be predicted with the same degree of accuracy. It is more easily predictable for children whose mental development falls within the normal range rather than for those whose mental development shows marked deviation from the average.



ACTIVITY 3.1

Comment on the following :

i) Development involves change.

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ii) Development is often predictable.

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3.6 LET US SUM UP

- Growth refers to change in size; development implies overall changes in the individual.
- The principles of development state that-
  - it is a continuous process;
  - it follows a pattern;
  - it proceeds from general to specific responses;
  - it proceeds at different rates for different parts of the body;

changes in the quality or character rather than in quantitative aspects.

- Growth is one of the parts of developmental process. In a strict sense, development in its quantitative aspect is termed as growth. Development is a wider and comprehensive term. It refers to overall changes in the individual.
- Growth describes the changes which take place in particular aspects of the body and behaviour of an organism. Development describes the changes in the organism as a whole and does not list the changes in parts.
- Growth does not continue throughout life. It stops when maturity has been attained. Development is a continuous process. It goes from womb to tomb. It does not end with the attainment of maturity, the changes however small they may be, continue throughout the life span of an individual.
- The changes produced by growth are the subject of measurement. They may be quantified. Development implies improvement in functioning and behaviour and hence brings qualitative changes which are difficult to be measured directly.



CHECK YOUR PROGRESS

Q.2. State any two relationships between growth and development.

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3.5 PRINCIPLES OF DEVELOPMENT

We have to understand the principles of development also, which will help us to know how development occurs and also know what the various dimensions of development are**.**

The following are the important principles of Development –

- **Development is a continuous process :** First development is a continuous process. Development does not stop at any time. It continues from the moment of conception until the individual reaches maturity. It takes place at a slow or a rapid rate but at a regular pace rather than by leaps and bounds.

  You may be surprised to know that the physical manifestations of certain features may appear to be sudden; the process of development is continuous. For example, speech does not come over-night. It has gradually developed from the cries and other sounds made by the baby at birth.

  The fact that development is continuous emphasises the point that each stage of development has its foundations built upon a preceding stage and has a definite influence on the succeeding stage of development.

  There may be a break in the continuity of growth due to illness, starvation or malnutrition or other environmental factors or some abnormal conditions in the child's life.

  According to Growth and Development, the life of an individual can be divided into the following major developmental periods :

* Pre-natal period (from conception to birth)
* Neo-natal period (birth to 10-14 days)
* Babyhood (2 weeks to 2 years)
* Early childhood (2 years to 6 years)
* Late childhood (6 years to 12-13 years)
* Adolescence (from 12-13 years to 18-19 years)
* Adulthood (from 18-19 years and onwards)

- **The Principle of Interaction of Maturation and Learning :** Another important principle of development is that it occurs as a result of both maturation and learning. Maturation refers to changes in a developed organism due to the unfolding ripening of abilities, characteristics, traits and potentialities present at birth. Learning denotes the changes in behaviour due to training and or experiences. Maturation is the inner growth process unaffected by training. Another factor that causes growth is 'learning'. Learning implies exercise and experience on the part of an individual. Learning may result from practice, which in due course of time may bring about a change in the individual's behaviour.

  Maturation and learning are closely related and one influences the other. This means that traits potentially present will not develop to their maximum without effort or learning. Thus, learning have a great influence on growth and development, maturation provides the raw material for learning and determines to a large extent the more general patterns of the individual's behaviour.



CHECK YOUR PROGRESS

Q.7. Fill in the blanks with the appropriate word / words.

i) Development is a joint product of both _____ and _____.

ii) Each child is a _____ individual.

Q.8. State whether true or false.

i) There are individual differences in development.

ii) Physical and Intellectual development is not affected by genetic and Environmental factors.

two work hand in hand from the very conceptions. The environment bears upon the new organism from the beginning. Among, the environmental factors like nutrition, climate, the conditions in the home, the type of social organisation in which individual move and live, the roles they have to play and other.

- **Principle of uniqueness :** Development is individualized process. Although the pattern of development is similar for all children, they follow the pattern at their own rate. These individual differences arise because each child is controlled by a unique combination of hereditary endowment and environmental factors. Every child follows a developmental timetable that is characteristically unique for each child. All children therefore do not reach the same point of development at the same age.

Individual differences are caused by the both hereditary and environmental conditions. The child's physical development, for example, depends partly on the hereditary potential and partly on the environmental factors such as diet, general health, climate etc.

Development is also affected by the genetic factors. A child should be provided with opportunities for experiences and learning. These include:

a) A stimulating environment where the child can explore. The environment must include materials which arouse curiosity and facilitate learning, and

b) encouragement and guidance from parents and teachers.

Each child is a unique individual. No two children can be expected to behave or develop in an identical manner although they are of the same age. For example, in the same class, a child who comes from a deprived environment cannot be expected to do as well in studies as a child of the same ability whose parents put high value on education and encourage the child to study.



CHECK YOUR PROGRESS

Q.3. Indicate the factors that affect in the continuity of growth.

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Q.4. Mention the major developmental periods of human life.

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- **Development follows a pattern :** Secondly, development occurs in orderly manner and follows a certain sequences. In nature we find that every species or organism follows a pattern of development. The same is the case with human beings. Development occurs in orderly manner and follows a certain sequence which, in general is the same for most children. Each stage of development leads to the next. For instance, all children first learn to sit up without support before they stand. Similarly, they learn to draw a circle before attempting to draw a square.

The rate and speed of development may vary in individual cases, but the sequence of the pattern is the same. A child from a disadvantaged home and a child from an affluent home, both follow the same pattern of development, although the latter may develop at a faster rate due to the facilities available at home.

One of the sequential patterns of development relate to the two directions in which development proceeds. Firstly, development proceeds from the upper portions of the body toward the lower portions. This is referred to as "head to toe" sequence. This means that improvements in the structure and function in a child's body come first in the head region, then in the trunk and last in the leg region. This growth pattern helps to explain why children sit before they can stand and crawl before

they can walk.

Secondly, development proceeds from the centre line of the body outward towards the distance or peripheral parts referred to as “near to far” sequence. Hence, in a foetus, the head and the trunk are fairly well developed before the rudimentary limb buds appear, gradually the arm buds lengthen and then develop into hands and fingers. This growth pattern explains, for instance, why children in the early years are more adept at controlling larger muscles than the whole limbs. They are unable to control finer muscles that are required for the manipulation of tiny objects with fingers.



CHECK YOUR PROGRESS

Q.5. What develops first —-

i) legs or toes?

ii) head or trunk?

iii) trunk or legs?

iv) arms or legs?

v) arms or fingers?

- **Development proceeds from general to specific responses :** Thirdly, it makes from a generalized to localized behaviour.In studying the development pattern of children, it is observed that general activity always precedes specific activity. The early responses of the baby are very general in nature which is gradually replaced with specific ones. The earliest emotional responses of the new born are generally diffused excitement and this slowly gives way to specific emotional patterns of anger, joy, fear, etc. Babies wave their arms in general, random movements before they are capable of such specific responses as reaching for an object held before them. Similarly, in early

stages of language development the child may use a particular word for any type of animal/ eatable. Gradually, as his / her vocabulary increases, he/she will learn to use correct specific words. Thus, uncoordinated movements/ responses are gradually replaced by specific ones.

- **Development involves change :** Development involves a progressive series of changes**.** The human being is never static. From the moment of conception to the time of death, the person is undergoing changes. Nature shapes development most clearly through genetic programming that may determine whole sequences of later development. It refers to a progressive series of orderly coherent changes. Growth on the other hand refers to quantitative changes increasing in size and structure. Development implies both quantitative and qualitative changes.



CHECK YOUR PROGRESS

Q.6. State whether true or false.

i) The pattern of development is the same for all children, but the rate differs.

ii) The pattern and rate of development is the same for all children.

iii) The rate of development is the same for all children, but the pattern differs.

iv) Both the rate and pattern of development are different for different children.

- **Development is a product of interaction of the heredity and environment :** Child at any stage of his growth and development is a joint products of both heredity and environment. But it is not possible to indicate exactly in what proportion heredity and environment contribute to the development of an individual. The