

1.4(a) Factors affecting growth and development :

The development of physical, mental traits of human being is influenced by a host of factors. These factors can be grouped under certain areas.

(a) Maturation and learning

(b) Heredity and Environment.

1.4(b) Maturation and Learning :

The word 'Maturation' is used to designate qualitative change, that is

changes in the complexity of structures which make it possible for a structure to start functioning or to function at higher levels. It refers to the internally determined change in such things like body size, shape, skills that begins at conception and continue until death. Development which is determined maturationally occurs regardless of practice and training. For example the growth of the foetus in the mother's womb is governed by maturation. Moreover, maturational development does not stop at birth, certain development of skill required in crawling, walking, running and climbing are also acquired in sequence as well as these are the result of internal physiological changes. But certain activities like swimming, cycling, skating require training and practice. So maturation covers the anatomic, physiologic and chemical changes of the body that occur with time and over which the child has some control. All these push the child towards adulthood. The effect of such changes depends on appropriate environment. If the environment is conducive, the result will be positive.

Learning:

It is another factor influence on growth and development. Learning refers to the acquisition of a new behaviour or modification of the previous behaviour through some kind of practice, exercise or effort by the individual. It is the modification in behaviour to meet environmental requirements. The child acquires competence in using his resource receive from heredity through the process of learning. But opportunity is necessary for the learning process. For example – if a child has mechanical aptitude but if the environment is not conducive or he does not get chance to play and manipulate different technical activities, then the mechanical aptitude will not develop. It is not possible to develop and mature fully the heredity tendencies without proper environmental support.

Learning may take place under imitation, identification or training under different condition of motivation. In case of imitation learning, the child continuously copies what he sees others do but in case of identification, the child attempts to adopt as his own values, attitudes, motives and behaviour of those he admires or loves.

1.4 (c) Heredity and Environment :

The influence of heredity and environment on the development of an individual has been described differently by educationalists. But the fact is that – the functioning of heredity and environment is similar to that of two eyes, two hands, two feet etc., on the development of an individual. Each one is supplementary to the other. For the balanced and harmonious development of an individual, a balanced and harmonious relation between heredity and environment is essential. Let us see how heredity and environment affects in the growth and development of a child.

Heredity :

It refers to those inborn physical and mental traits that an individual inherits by birth. In the words of R.S. Woodsworth (1945), “Heredity covers all the factors that are present in the individual when he begins life not at birth, but at the time of conception about nine months before birth”. Heredity also refers to the inborn qualities and potentials the child already possesses before he/she enters the physical world.

Life begins with the conception and from a single cell, a child grows and develops to a complete human being. In this process, the child gets its parental characteristics through chromosomes/genes. Thus the child inherits the physical features, work efficiency of his parents, i.e., height, complexion, physique, colour of the hair, skin, eye, blood group etc.

It is also important to note that – each parent is the inheritor in equal parts from both his or her parents; who in turn inherit equally from their parents. The child inherits his capital not from his parents but through his parents. That is why a child has the nose of his mother, chin of his father, ears of his grandfather, hair from his uncle and so on. It does not mean that - the child must always be exactly like his parents or he will inherit all traits of his parents. Sometimes it is also seen that – the child of an extraordinary genius becomes an idiot, the parents have fair complexion and the child is black etc. Thus the characteristics of the child depends not only upon his parents alone but also grandparents and great grandparents.

Environment:

It refers to physical, mental, intellectual, moral, social, cultural and religious factors which affect the development of a child. Environment includes the home, the neighbourhood, the peers, school etc. which influence the development of an individual. All these influence and mould the behaviour of an individual from time to time. It is also important to note that though two individuals born with same biological heritage differ due to different environment.

The environment plays an important role and influence the growth and development of an individual right from the time of fertilization. Therefore, it is not only important that what happens after birth, but what goes inside the womb of the mother after conception. R. S. Woodworth opined that – “Environment covers all the outside factors that have acted on the individual since he began life”. Thus, the nutrition received by the embryo through the blood stream of the mother, the physiological and psychological state of the mother during pregnancy, her habits, interests etc influence the growth and development of a child. After birth, the child is exposed to different environmental forces which is external in nature. These forces are of two types – physical and social or cultural forces. Physical forces includes – food, water, atmosphere of the home, school, village or city, and other physical facilities available in the environment. On the other hand, parents, teachers, other family members, peers, neighbours, member of a community or a society, other community facilities are included in the social forces. All these forces have an important role in all round growth development of a child.