

Child Development and Pedagogy

As we grow both in quantitative and qualitative terms, some sort of development occurs to us. The optimum development of a child is necessary for society. For the upbringing of such a group, we need a well-established learning system which needs learned teachers. The study of being a teacher or the process of teaching is called pedagogy or instructive strategies. The six areas of learning and development which make up the skills, knowledge and experiences are:

- Communication, Language, and Literacy
- Knowledge and Understanding of the World
- Creative Development
- Personal, Social, and Emotional Development
- Problem Solving, Reasoning and Numeracy, and
- Physical Development

Child Development: Concept of Development and Stages

Growth is the quantitative changes in size which include physical changes in height, weight, size, internal organs, etc. In contrast to this, the development is the qualitative changes that happen in an individual simultaneous with the quantitative change. The biological and psychological changes that occur in human beings between birth and the end of adolescence, as the individual progresses from dependency to increasing autonomy can be referred to as the Child development. These changes may be influenced by genetic factors and events during prenatal life. The development changes can happen either due to genetically controlled processes (called maturation) or because of environmental factors and learning. But in most cases, the development results because of the interactions between these two factors. Psychologists define each stage of this development with a certain span and characteristics.

Age Groups	Development Stages	Schooling Stage
Birth to 2 years	Infancy	
2 years to 6 years	Early Childhood	Pre-Primary
6 years to 12 years	Later Childhood	Primary

12 years to 18 years	Adolescence	Secondary and senior secondary
18 years to 40 years	Young Adulthood	
40 years to 65 years	Adulthood	
Over 65 years	Mature Adulthood	

- The Development of Concepts

Development Stage	Age Groups	Characteristic
1	Birth to 2 years	Control of sensory-motor. A little experience and hence no concept formation
2	2 years to 4 years	Acquires experience and hence extracts concepts from the same
3	4 years to 7 years	Acquires experience about complex situations and makes perceptual comparisons
4	7 years to 11 years	Acquires ideas and master thought operations at the concrete level
5	11 years and above	Masters thought operations at the abstract level

Principles of Development

The four principles of human development are:

- **Continuity**

From conception to death development is a continuous process. From the early stages of life, the development occurs not only in the body size, and functioning but also behaviour. Even after reaching maturity period, the development does not end it just continues. The changes continue until death ends the life cycle.

- **Sequentiality**

The development is sequential or orderly. Both humans and animals follow a development pattern which is peculiar for them. In prenatal development there is a genetic sequence, appearing at fixed intervals with certain characteristics.

- **Generality to Specificity**

The development takes from a general path to specific ones as it progresses. The fetus moves its whole body but is incapable of making specific responses -Infants wave their arms randomly. They can make such specific responses as reaching out for an object near them.

- **Differential**

The tempo of development is not even. Individuals differ in the rate of growth and development. Boys and girls have different development rates. Each part of the body has its own particular rate of growth. Development does not occur at an even pace. There are periods of great intensity and equilibrium and there are periods of imbalance. The development achieves a plateau and this may occur at any level or between levels.

Principles of Child Development

The Principles of Child Development is marked by three interrelated processes, and they are:

- Differentiation
- Integration
- Learning

Principles of Differentiation and Integration

Let's try to understand these two concepts through this example. The fertilization of the ovum with the sperm

results in a single cell, which is called a zygote. The zygote then starts multiplying at a very fast rate into cells that are all of the same kind. These cells then acquire different characteristics and form different tissues like nerves, bones, blood and so forth; each having a special function. These different tissues subsequently- coordinate with each other to form complex systems like the digestive, circulatory and respiratory systems. When the similar cells of the zygote change to form different tissues like nerves and bones, the process is **differentiation**.

Differentiation means that development proceeds from simple to complex, from general to specific. When different tissues coordinate to form a system, the process is called **integration**. Integration means the coordination of various parts to form an increasingly complex structure. It also refers to the coordination of different behaviour patterns that result in a higher level of complexity. In the infancy period, a kid used to smile at everybody, but as it grows it will differentiate his/ her mother's face from others. Then the child integrates the mother's face with her smell, touch, and all aspects of that individual.

Jean Piaget's Theory of Cognitive Development

Jean Piaget, a swiss biologist is regarded as one of the pioneers in Child Psychology studies. Piaget believes that a person understands whatever information fits into his established view of the world. When that information doesn't fit, he/ she must re-examine and adjust his thinking to accommodate the new information. He introduced four stages of cognitive development, they are as follows:

- Schemes/ Cognitive Structures
- Assimilation
- Accommodation
- Equilibrium

Piaget's four stages

Stage	Age	Characterised by
Sensorimotor	Birth to 18–24 months old	Differentiate self from objects, recognizes self as an agent of action and begins to act intentionally realises that things continue to exist even when no longer present to the sense

Pre-operational	2 to 7 years old	<p>Symbolic thought</p> <p>learns to use language to represent objects by images and words</p> <p>thinking is still egocentric</p> <p>classifies objects by a single feature</p>
Concrete operational	7 to 11 years old	<p>Operational thought</p> <p>can think logically about objects and events</p> <p>achieves conservation of number, mass, and weight</p> <p>classifies objects according to several features and can order them in series along a single dimension such as size</p>
Formal operational	Adolescence to adulthood	<p>Abstract concepts</p> <p>can think logically about abstract propositions and test hypothesis systematically</p> <p>becomes concerned with the hypothetical, the future, and ideological problems</p>

Schemes, assimilation, accommodation, and equilibration

According to Piaget Schemes are cognitive structure or behaviour pattern of adults and children which they use in dealing with the environment objects. As one develops pattern will also change and will get entangled with other p[atterns and results in a more complex pattern. These various patterns with their contents form the basic structure of the human mind.

Assimilation is the process of using or transforming the environment so that it can be placed in preexisting cognitive structures. Accommodation is the process of changing cognitive structures to accept something from the environment. Both processes are used simultaneously and alternately throughout life. An example of assimilation would be when an infant uses a sucking schema that was developed by sucking on a small bottle when attempting to suck on a larger bottle. An example of accommodation would be when the child needs to modify a sucking schema developed by sucking on a pacifier to one that would be successful for sucking on a bottle.

The structures changes from one form to another by the process of equilibration-maintaining balance between the child and his changing environment. All children try to strike a balance between assimilation and accommodation, which is achieved through a mechanism called equilibration. Equilibration helps explain how children can move from one stage of thought into the next.