

# Montessori education theory

Montessori education is fundamentally a model of human development, and an educational approach based on that model. The model has two basic principles. First, children and developing adults engage in psychological self-construction by means of interaction with their environments. Second, children, especially under the age of six, have an innate path of psychological development. Based on her observations, Montessori believed that children who are at liberty to choose and act freely within an environment prepared according to her model would act spontaneously for optimal development.

Montessori saw universal, innate characteristics in human psychology which her son and collaborator Mario Montessori identified as "human tendencies" in 1957. There is some debate about the exact list, but the following are clearly identified:

- Abstraction
- Activity
- Communication
- Exactness
- Exploration
- Manipulation (of the environment)
- Order
- Orientation
- Repetition
- Self-Perfection
- Work (also described as "purposeful activity")

In the Montessori approach, these human tendencies are seen as driving behavior in every stage of development, and education should respond to and facilitate their expression.

Montessori's education method called for free activity within a "prepared environment", meaning an educational environment tailored to basic human characteristics, to the specific characteristics of children at different ages, and to the individual personalities of each child. The function of the environment is to help and allow the child to develop independence in all areas according to his or her inner psychological directives. In addition to offering access to the Montessori materials appropriate to the age of the children, the environment should exhibit the following characteristics:

- An arrangement that facilitates movement and activity
- Beauty and harmony, cleanliness of environment
- Construction in proportion to the child and her/his needs
- Limitation of materials, so that only material that supports the child's development is included
- Order
- Nature in the classroom and outside of the classroom

## **Planes of development**

Montessori observed four distinct periods, or "planes", in human development, extending from birth to 6 years, from 6 to 12, from 12 to 18, and from 18 to 24. She saw different characteristics, learning modes, and developmental imperatives active in each of these planes, and called for educational approaches specific to each period.

The first plane extends from birth to around six years of age. During this period, Montessori observed that the child undergoes striking physical and psychological development. The first-plane child is seen as a concrete, sensorial explorer and learner engaged in the developmental work of psychological self-construction and building functional independence. Montessori introduced several concepts to explain this work, including the absorbent mind, sensitive periods, and normalization.

Montessori described the young child's behavior of effortlessly assimilating the sensorial stimuli of his or her environment, including information from the senses, language, culture, and the development of concepts with the term "absorbent mind". She believed that this is a power unique to the first plane, and that it fades as the child approached age six. Montessori also observed and discovered periods of special sensitivity to particular stimuli during this time which she called the "sensitive periods". In Montessori education, the classroom environment responds to these periods by making appropriate materials and activities available while the periods are active in each individual young child. She identified the following periods and their durations:

- Acquisition of language—from birth to around 6 years old
- Interest in small objects—from around 18 months to 3 years old
- Order—from around 1 to 3 years old
- Sensory refinement—from birth to around 4 years old
- Social behavior—from around 2½ to 4 years old

Finally, Montessori observed in children from three to six years old a psychological state she termed "normalization". Normalization arises from concentration and focus on activity which serves the child's developmental needs, and is characterized by the ability to concentrate as well as "spontaneous discipline, continuous and happy work, social sentiments of help and sympathy for others."

The second plane of development extends from around six years to twelve years old. During this period, Montessori observed physical and psychological changes in children, and developed a classroom environment, lessons, and materials, to respond to these new characteristics. Physically, she observed the loss of baby teeth and the lengthening of the legs and torso at the beginning of the plane, and a period of uniform growth following. Psychologically, she observed the "herd instinct", or the tendency to work and socialize in groups, as well as the powers of reason and imagination.

Developmentally, she believed the work of the second plane child is the formation of intellectual independence, of moral sense, and of social organization.

The third plane of development extends from around twelve years to around eighteen years of age, encompassing the period of adolescence. Montessori characterized the third plane by the physical changes of puberty and adolescence, but also psychological changes. She emphasized the psychological instability and difficulties in concentration of this age, as well as the creative tendencies and the development of "a sense of justice and a sense of personal dignity." She used the term "valorization" to describe the adolescents' drive for an externally derived evaluation of their worth. Developmentally, Montessori believed that the work of the third plane child is the construction of the adult self in society.

The fourth plane of development extends from around eighteen years to around twenty-four years old. Montessori wrote comparatively little about this period and did not develop an educational program for the age. She envisioned young adults prepared by their experiences in Montessori education at the lower levels ready to fully embrace the study of culture and the sciences in order to influence and lead civilization. She believed that economic independence in the form of work for money was critical for this age, and felt that an arbitrary limit to the number of years in university level study was unnecessary, as the study of culture could go on throughout a person's life.