2. **The Method**

_A Framework for Understanding_

We cannot with our efforts create a man. That is the task of the child himself and it is the most important side of the whole education question...  
Maria Montessori  
_Reconstruction and Education_
Scientific observation then has established that education is not what the teacher gives; education is a natural process spontaneously carried out by the human individual, and is acquired not by listening to words but by experiences upon the environment. The task of the teacher becomes that of preparing a series of motives of cultural activity, spread over a specially prepared environment, and then refraining from obstructive interference. Human teachers can only help the great work that is being done, as servants help the master. Doing so, they will be witnesses to the unfolding of the human soul and to the rising of a New Man who will not be the victim of events, but will have the clarity of vision to direct and shape the future of human society.

Maria Montessori

Education for a New World

Montessori education is both art and science.

It was Montessori’s aim to create a new science of teaching based on natural development, which would enable each person’s full potential to be realized.

She designed a system through a process of observation and experimentation and considered these the means to implement and perfect that system. The teacher observes to determine the student’s needs—needs that the learner instinctively knows and expresses—and then experiments to create an environment that will allow the learner to meet these needs and follow his or her natural development. All her methods and ideas are based on, and depend on, an on-going process of observation and experimentation.

To a Montessorian, education is viewed as an aid to life. Its purpose includes, but goes beyond, the acquisition of basic skills and knowledge. While students are encouraged to become thoughtful readers, clear writers, skillful computers, problem solvers and logical thinkers, they are also encouraged to fully develop their potential—physical, emotional, social, moral and spiritual as well as intellectual.

Unlike most other educational models, the Montessori Method recognizes the importance of character development and spirituality in human growth.

One of the most profound features of Montessori’s approach to human development is its willingness not only to acknowledge the spiritual, but to use it; not only to tolerate it, but to honor it. In this way education becomes a great journey of self-realization and self-awareness as each individual endeavors to find his or her unique place in the world and in the Universe.

While many Montessorians may choose not to emphasize this spiritual aspect, an understanding of it is central to Montessori’s approach. Those who emphasize it are usually careful to distinguish it from any formal religious connotations.

Montessori’s writings frequently refer to the spiritual development of both teachers and students. Her rich use of metaphorical language to describe the educational process, her focus on spiritual awareness and the role of intuition in her approach, reveal a balance in the method between empirical science and intuitive art.
For schools to be most successful they must be places of self-discovery where individuals learn how to learn and are provided the means and freedom to become lifelong learners and develop their whole selves to reach their potentials.

Montessori viewed education as a means to improve society as well as individuals. She viewed a reformed educational system as vital to promoting peace and improving society.

For the purposes of this book, and to begin to fully understand the Montessori Method of education, it is helpful to think of it in terms of a triad composed of:

- the learner
- the learning environment
- the teacher.

These three elements function together. Learning occurs through the learner’s interaction with the learning environment. The teacher is both a part of that environment and a dynamic link between it and the learner.

By examining the learner, the environment and the teacher separately I will describe:

- basic Montessori philosophy
- characteristics of Montessori classrooms and curriculum
- practical implications for adults who work in Montessori schools.

*If our soul is far from the child, then we see only a small body, just as we see the star in the sky as a little shining point when in reality it is an immensity of heat and light. The art of spiritually approaching the child, from whom we are too far, is a secret that can establish human brotherhood; it is a divine art that will lead to the peace of humankind.*

*Maria Montessori*

*Gandhi and the Child*
Let us start with one very simple reflection: the child unlike the adult is not on his way to death. He is on his way to life.

Maria Montessori
The Absorbent Mind
Growth is not merely a harmonious increase in size, but a transformation. Man is a sculptor of himself, urged by a mysterious inner force to the attainment of an ideal determined form. Growth may be defined as a seeking after perfection, given by an impulse of life.

Maria Montessori
To Educate the Human Potential

Montessori based her philosophy and method on a deep understanding of and respect for children.

She wrote that all human beings are born with certain universal and certain unique potentials. All people enter the world with a unique inner plan that directs and drives them to develop, to master and to perfect themselves. Human beings begin life with internal timetables and patterns already established for growth, both physically and psychologically. If free to grow in healthy surroundings under suitable conditions, children naturally grow into intelligent, competent and responsible adults. It is the task of adults to provide such conditions and aid children in their great quests to develop to their full potentials.

According to Montessori theory, children are living in a process of self-realization and discovery. While Montessorians assume that all people possess many of the same basic traits, tendencies and needs and that they pass through the same basic stages, they also emphasize that each person is different and must be regarded and respected as a unique individual born with the right to live in a healthy world.

*The child is a worker and a producer. Although he cannot share in the work of adults, he has his own difficult and important task to perform—that of producing a man....But this tiny child eventually grows into an adult and if the latter's intelligence has become enriched through his psychic conquests and become resplendent with a spiritual light, this is due to the child that he once was.*

Maria Montessori
The Secret of Childhood

**Four Planes of Development**

Our method has been based on the fact that we have been guided by the manifestations of children at different phases of growth. Each of these may be considered a level or a plane. On each different level of life there are different manifestations....The characteristics of each are so different that the passages from one phase to the other have been described by certain psychologists as “rebirths.”

Maria Montessori
The Four Planes of Education
Montessori theory divides human growth into four stages of development that go from birth to maturity. These developmental periods, or levels, have distinct developmental tasks and ideal conditions for learning. They parallel other theorists of human development, but in Montessori's integrated theory the stages are viewed holistically and include the physical, emotional, social, intellectual, moral and spiritual development of the whole person.

While each individual will pass through these phases in unique ways and at different rates, some generalizations can be made about these stages or phases. Each phase lasts approximately six years, and each is divided into two three-year periods. These correspond to Montessori curriculum and multi-age groupings.

I. Early Childhood, 0–6 years of age

This is a period of dramatic growth and transformation. Emphasis is on physical growth and independence, the concrete world and the construction of the self as the center of things in a sensory-motor, factual, protected environment. The young child is capable of taking in great amounts of knowledge through the senses. Learning is predominantly unconscious. The 0–3 year-old tends to be more exploratory and the 3–6 year-old more ordered.

The central question is "What is it?" The overriding desire is to "Let me do it myself!"

II. Childhood, 6–12 years of age

This is a period of relative stability, health and more even growth. Emphasis is on intellectual growth and independence, reasoning, moving from concrete understanding to abstract thinking, imagination, culture, research, understanding right from wrong, good from evil and on seeing the self in relation to peers. Children seek to acquire information and find out about everything. The 6–9 year-old is in a more exploratory and expanding period and the 9–12 year-old is more stable and secure.

The central question is "Why is it?" and the overriding desire is "To know!"

III. Adolescence, 12–18 years of age

This is another period of instability, dramatic growth and transformation. Emphasis is on social and economic growth, independence and interdependence, on abstract reasoning, emotional development and on seeing the self in relation to human society in general. Learning focuses on the larger society, community, relationships, vocation and service to others. Again, as in the other levels, the first half of this period is marked by more turbulence and expansion and the later by more stability.

The central question is "How can I fit in?" The overriding desires are to "Do with others!" and "Let me become myself!"
IV. Maturity, 18–24 years of age

This is another period of stable health and less dramatic growth. Emphasis is on the great potentials and possibilities that life has to offer, discovering one’s mission or missions, realizing that culture and education have no bounds and achieving aspirations for the whole of humanity. This corresponds to a time of life planning, postsecondary education and one’s first job.

The central questions at this age are, “Why am I here?” and “How far can I go?” The overriding desire is for understanding and integration of the self with others and with the world in general.

_Growth is not merely a harmonious increase in size, but a transformation. Man is a sculptor of himself, urged by a mysterious inner force to the attainment of an ideal determined form. Growth may be defined as a seeking after perfection given by an impulse of life._

Maria Montessori
To Educate the Human Potential

Basic Human Tendencies

Just as all human beings share the “constructive rhythm of life” (Grazzini, 1979) as seen in the four planes of development, they also share certain basic tendencies. These tendencies exist within and across the planes and stages of life. They serve to assist natural development and their expression is considered important to the well-being of the individual. Knowledge of these tendencies helps guide many Montessorians in preparation of the learning environment, planning appropriate activities and understanding the needs of students.

_In order to understand Montessori, we need to understand that it is the tendencies of man that govern his development, and that these tendencies must be realized and catered for, if there is to be any real change in the structure and content of education, with a consequent answer to the problems facing us today._

Margaret E. Stephenson
An Unfolding—the Child from 3 to 6

Montessorians have distinguished the following 11 basic human tendencies:

- **Exploration:** Humans are naturally curious. They are explorers, experimenters and discoverers. Through such investigation and exploration they learn from what they find.

- **Orientation:** People want to know their relationship to their place in the world and the people and things in it. They compare and contrast them-
selves with other objects, plants, animals and people to see where they are and how they fit in.

- **Order**: Humans work to make sense of the world. Chaos and confusion are unsettling. They readily find patterns and classification systems in their environments.

- **Communication**: People have a natural inclination to communicate. Across cultures and time periods human beings have always worked to exchange information and share experience.

- **Repetition**: Children as well as adults learn through practice and reach closer to perfection through repeated practice.

- **Exactness**: People adjust, refine and improve. People perceive when things don’t fit together and tend to work towards exactness.

- **Activity**: It is through activity that people are able to explore, experience and practice. Active involvement with the environment leads to learning and self-development.

- **Manipulation**: People work with their hands. There is a connection between learning and doing, between the mind and the hand.

- **Work**: Human beings throughout history have shown the ability and willingness to work and strive for survival and improvement. People work in cooperation with others and with their environment.

- **Abstraction and Creativity**: Humans have a natural ability and interest in taking impressions and sensations and expanding and altering them in their minds. Humans are creative. They can imagine that which does not exist and can think beyond the concrete and real.

- **Self-perfection**: Healthy human beings have a natural desire to improve. They find satisfaction in personal growth and tend to work toward their own perfection.

These tendencies are most evident in secure and healthy learners. The student who is insecure, ill or fearful is less eager to engage in many of the activities otherwise inspired by these tendencies. Conversely, secure, healthy and happy students will pursue them with little hesitation and often intense energy.
Intrinsic Motivation

No guide, no teacher can divine the intimate needs of each pupil and the time of maturation necessary to each; but only leave the child free and all this will be revealed to us under the guidance of nature.

Maria Montessori
Spontaneous Activity in Education

It is certainly necessary to centralize the interest of the child, but the usual methods today are not effective to that end. How can the mind of a growing individual continue to be interested if all our teaching be around a particular subject of limited scope?...How can we force the child to be interested when interest can only arise from within? It is only duty and fatigue which can be induced from without, never interest! That point must be clear.

Maria Montessori
To Educate the Human Potential

For the natural tendencies to govern and for the interests and needs of the learner to be found and followed, intrinsic sources of motivation must be valued. Trust must be placed in the learner, for he or she is the only one who can know (although perhaps unconsciously or intuitively) what, when and, often, how something can best be learned. This is facilitated through the provision of emotionally safe and responsive learning environments and opportunities to develop self-awareness.

Montessorians recognize that real motivation comes from within. Coercion through external rewards and punishments is often regarded as unnecessary and detrimental because this robs learners of the pleasure of the natural intrinsic rewards of learning.

In their quest to become all that they can, learners can be highly motivated from within by needs for adaptation, independence, acceptance and knowledge. Healthy learners will be drawn to do what they need to when placed in safe, orderly, healthy and responsive classrooms and guided by caring professionals.

Choices and flexibility are important ingredients in any Montessori classroom or school.

Montessori recognized that the only valid impulse to learning is the self-motivation of the child. Children move themselves toward learning. The directress may prepare the environment, may direct activity, may offer stimulation, but it is the child who learns. If we get this principle across to parents, we have accomplished our task as advisors to the primary educator, who is the parent.

John McNamara
Elementary Education and Parent Education
The Developing Mind

Montessori differentiated several characteristics of the human mind and personality. Four distinct but related aspects of the mind help to describe certain characteristics that develop over time.

To some degree all these capacities operate together regardless of an individual’s age. Certain kinds of thinking, however, dominate as people mature. As adults we constantly take in and order information, make judgements about it and put it in a social context.

The absorbent mind

The absorbent mind refers to the mind’s capacity to take in information and sensations from the world.

Very young children demonstrate an awesome ability to take in sensations from the world around them. They spend a large portion of their first years using their eyes, ears, hands, skin, nose and mouth soaking in their world. In The Absorbent Mind, Montessori wrote that “The senses, being explorers of the world, open the way to knowledge.” It is this ability to absorb through the senses that accounts for the young child’s adaptation to the social group, understanding of the surroundings, acquisition of language and culture and mastery of a variety of skills. For the child from birth to age two or three, this is primarily an unconscious process. The young child is often dominated by unconscious needs to absorb through observation, participation and exploration. Sight, sound, touch, taste, smell and movement become gateways to the world. Stimuli are constantly being taken in with great interest, attention and delight. Consciousness gradually becomes more involved and the child begins to intentionally direct and focus attention. Sensory experience, then, becomes vitally important because it is through it that the intellect develops. The child from birth to age three, and to a lesser degree to age six, relies on the absorbent mind. It is said to be unconscious up to age three and conscious from three to six.

The little child of three years old carries within him a heavy chaos....He is like a man who has accumulated an immense quantity of books piled up without any order and who asks himself, “What shall I do with them?”

Maria Montessori
Spontaneous Activity in Education

The mathematical mind

The mathematical mind refers to the mind’s capacity to order the information and impressions taken in.

The natural ability to order sensations (classify, compare, analyze, generalize, synthesize, differentiate, associate, etc.) led Montessori to conclude that the mind is mathematical as well as absorbent. The mathematical powers are rooted in, and
not necessarily distinct from, the powers of absorption. Humans of nearly any age create order for themselves. It is especially important for the young mind, which has no established order, to have materials and an environment available that will aid in the development of sound, reality-based, intellectual order. This order can only come from contact with concrete, tangible objects in the real world.

The mathematical mind can be distinguished from mental powers such as imagination, although it serves as a foundation for them.

**The reasoning mind**

Once information is taken in and organized, human beings have the capacity to find purposes, causes, effects and logical connections. Montessorians call this capacity the reasoning mind. It is the *reasoning mind* that allows us to make judgments from the impressions we gather. This is possible, in part, because the maturing mind is able to make abstractions from experience. This capacity usually begins to be demonstrated most clearly around age six or seven. So elementary students become generalizers, synthesizes, analyzers and evaluators as well as classifiers and organizers.

During the second plane of development, from about six to nine, the reasoning mind tends to grow in importance. Learners in this period want to understand why things are as they are. They focus on fairness and begin asking the big questions: “Where did I come from? Why am I here? What is justice? What is right and wrong?”

This is also the age at which the child's imagination blossoms. It is through the imagination that people are able to consider the possible, grasp the magnitude of the past and see potentials for the future.

**The socially conscious mind**

The *socially conscious* mind refers to the maturing mind's capacity to put ideas into a social context. Adolescents in particular tend to view things in relation to values and their benefit to the quality of society as a whole and each individual's place in it.

Almost as if in preparation for assuming the role of full adult, students at the secondary level need to discover how to make social decisions. These students are often focused on finding ways to belong and make a difference in their peer groups, families, school and community with an intensity not seen during younger years.

**Sensitive Periods for Learning**

According to Montessori theory, the learner is guided by inner forces that shape developmental needs. At times learners show strong *sensitivities* which lead them to choose experiences that are most appropriate for their immediate learning needs. Montessori called these times of heightened sensitivity for certain types of activity
sensitive periods. They are characterized by overpowering, sometimes obsessive, interest in particular types of learning. They may result in intense, prolonged activity and always serve to aid development and adaptation. An example is the sensitive period for language acquisition. During the first few years of life, human beings are specially attuned to attend to and practice speech. During this time learning to talk and understand the talk of others can be intense and delightful work for infants and toddlers. Young children will also pass through sensitive periods for order, for writing and for reading.

Once a skill, or goal, has been achieved, the sensitivity passes. If the time passes without the opportunity of satisfying the sensitivity, however, the interest wanes and it will never again be possible for that child to achieve that goal with the same ease or passion.

A child learns to adjust himself and make acquisitions in his sensitive periods. These are like a beam that lights interiorly or a battery that furnishes energy. It is this sensibility which enables a child to come in contact with the external world in a particularly intense manner. At such a time everything is easy; all is life and enthusiasm. Every effort marks an increase in power. Only when the goal has been obtained does fatigue and the weight of indifference come on.

When one of these psychic passions is exhausted another area is enkindled. Childhood thus passes from conquest to conquest in a constant rhythm that constitutes its joys and happiness.

Maria Montessori
The Secret of Childhood

While sensitive periods are most clearly associated with pre-elementary learners, the concept is useful for all educators. By respecting and using special interests and passions for learning in the variety of areas in which they arise, teachers are better able to capitalize on self-motivation in planning and implementing individualized instruction.

Effective Montessori teachers constantly watch for and respond to sensitive periods as they reveal the inner needs of the learner. The structure of the environment, the materials and the planned activities all are designed to capitalize on sensitive periods to make learning as fruitful as possible.

**Spontaneous Activity**

In the Montessori classroom students learn by doing. Youngsters choose from among a variety of materials or experiences and work alone or in groups at their own pace and as long as needed on particular tasks. It is learner-centered, not teacher-centered nor curriculum-centered.

Montessorians typically provide long, uninterrupted periods of self-directed work time for learners. Through two- to four-hour work sessions, learners develop work habits and powers of concentration and are allowed to reach greater depths of understanding.
Through such activity students adapt to the classroom situation and develop the self-discipline necessary to be successful in school and out. Over the period of a year, and throughout the progression of individuals from level to level in their Montessori education, students typically develop more self-discipline and become more independent. Montessorians generally assume that every child has the capacity to function well in a Montessori classroom; with consideration for others, an eagerness to learn and a healthy desire to improve. Montessorians often speak of a process of normalization in reference to an individual’s or a group’s developing ability to function well in a learning environment.

Allowing for spontaneous activity also helps teachers detect and capitalize on intrinsic motivation and sensitive periods. Master teachers become adept at stimulating bursts of intense “spontaneous” activity through well-timed presentations, dramatic stories, field trips and particularly striking lessons.

*There is nothing more difficult for the adult than to know how to appeal to the spontaneous and real activity of the child or adolescent. Only this activity, oriented and constantly stimulated by the teacher, but remaining free in its attempts, its tentative efforts, and even its errors, can lead to intellectual independence.*

*Jean Piaget*  
*To Understand Is to Invent*

In the normalized Montessori classroom, learners act upon the environment physically as well as socially and this becomes the primary means through which educational goals are achieved—through meaningful, self-initiated work and interactions.

**Individual Liberty**

The principle of *individual liberty* is at the root of Montessori education. Without liberty the nature of the learner cannot be revealed, observed or aided in its development. It is only through liberty that the learner can act spontaneously, follow inner needs, adapt, find order and develop independence.

The idea of liberty is woven deeply into Montessori’s concept of the environment as a natural, scientific laboratory and as a place for the development of discipline. Through liberty, the teacher can observe the learner and plan accordingly. Through liberty learners actively exercise their will power and develop the self-discipline essential to future learning. The most valuable discipline must come from within and, in order for it to come into being, there must be the freedom for it to be practiced.

Liberty does not mean abandonment. Montessorians recognize the importance of external support, structure and order. Structure is provided in the set-up of the physical environment, in the materials made available, in the choices offered, in the ground rules established and in the way people behave.
In Montessori Today (1996), Paula Polk Lillard describes four basic freedoms for the elementary learner in what she calls a “Bill of Rights for the elementary classroom.” These freedoms easily relate to Montessori students of all ages and include the freedom to:

- act by oneself for oneself
- act without unnecessary help or interruption, to work and to concentrate
- act within limits that are determined by the environment and the group
- construct one’s own potential by one’s own efforts.

Individual liberty is seen in the freedom of movement, freedom of choice, freedom from interference, freedom to work alone or with others and the freedom not to participate or work. As in any community, these freedoms have limits when they infringe on the rights of others. A constant challenge to the teacher, then, is to discover how to preserve and maximize individual liberty while preserving the rights of all and the welfare of the group.

Thus here again liberty, the sole means, will lead to the maximum development of character, intelligence and sentiment; and will give to us, the educators, peace and the possibility of contemplating the miracle of growth.

The principle of liberty is not therefore a principle of abandonment, but rather one which by leading us from illusions to reality will guide us to the most positive and efficacious care of the child.

Maria Montessori
Spontaneous Activity in Education

In our system we obviously have a different concept of discipline. That discipline we are looking for is active. We do not believe that one is disciplined only when one is artificially made silent as a mute and motionless as a paralytic. Such a one is not disciplined but annihilated. The child’s liberty should have its limit in the interests of the group to which it belongs.

Maria Montessori
The Discovery of the Child

**Individual Responsibility**

Along with the individual liberty and freedom in the Montessori learning environment, there must be individual responsibility.

From the Early Childhood level on, students help take responsibility by helping determine the rules of the classroom. Students also care for the environment by cleaning up their materials, taking care of plants and animals in the classroom and maintaining a clean and safe learning environment.
Elementary students often set personal goals, keep work records or journals, participate in parent-teacher conferences and, in so doing, take greater responsibility for their own education. In many elementary classrooms the learners assume almost total responsibility for cleaning and taking care of the classroom.

Teachers balance liberty and responsibility in the classroom. By carefully expanding freedoms as learners show they are able to handle them, teachers help develop each student's ability to assume increasing individual responsibility.