



PMC Assignment - Module-1 - Warda Aslam

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ROLL NO: D17515

INTRODUCTION TO MONTESSORI

MODULE-1



Question-1: Write a biographical note on Dr. Maria Montessori in your own words.

▪ **Prologue:**

Maria Montessori was an Italian physician, educator, and innovator, renowned for her educational method that is based on belief in the creative potential of children, their drive to learn naturally, & the right of each child to be treated as an individual. She is known as the pioneer of Montessori System of Education. Her educational reforms became the integral components of 21st century's education core. Maria Montessori was a vibrant, strong-willed, confident & strong lady of her time.



▪ **Montessori's Birth:**

Maria Montessori was born on 31st August, 1870 to an educated, middle-class family in the town of Chiaravalle, Ancona, Italy. She was the only child of her parents.



▪ **Family Background:**

Maria's father, Alessandro Montessori, was a conservative military man, & later worked as an accountant in civil services. Her mother, Renilde Stopanni, was a liberal & well-educated lady who always encouraged her in her educational pursuits.



▪ **Academic Achievements:**

Maria Montessori's quest for knowledge lasted lifelong. She had a chance to study in big cities throughout Italy because of her father's frequent transfers. At that time, almost entire Europe was extremely conservative towards women, but Maria pursued her education with utmost zeal & dedication, and began to break through barriers which constrained women's career. She entered a technical secondary school to study engineering first, but later upon changing her mind, got graduated with highest honors from medical school of the University of Rome. She became the first lady doctor of Italy in 1896, despite facing prejudice from her male colleagues.



- **Montessori's Public Speaking:**

Being the first lady doctor of a country, Maria was invited to speak at many conferences. She represented Italy at the International Congress for Women's Rights in Berlin in 1896, where she spoke about women's education & work conditions in Italy. She advocated a cause that still hasn't been resolved in our times;

"Equal pay for Equal work"

At the conference for women in London in 1900, she spoke against child labor.



- **Montessori's Medical Career:**

Soon after qualifying as a doctor in July, 1886, Dr Montessori got appointed at the San Giovanni Hospital. She also joined the post of surgical assistant at Santo Spirito Hospital in Rome, in November, 1886. She was able to make her mark as a good doctor. Along with diagnosing and treating her patients' illnesses, Dr. Maria specialized in pediatrics & psychiatry. In 1897, she joined a research program at the psychiatric clinic of the University of Rome, as a volunteer.



- **Working with Special Needs Children:**

As a part of her work at the psychiatric clinic, Maria was required to visit Rome's asylums for the insane, where she found some special-needs children kept in prison-like rooms. She & her team started working with those children. This initiated a deep interest in her in the need of children with learning disabilities, though always being unwilling to enter education as a career.

She took the idea of a scientific approach to education, based on observation & experimentation, and successfully achieved her goals.



▪ Montessori's Inspirations:



Montessori looked through medical libraries of Western Europe for almost a year in order to find out successful work done with the education of special children. She got inspired by the work of one Spanish and two French doctors of 18th and 19th centuries named PERIERA (1715-1838), ITARD (1775-1838) & SEGUIN (1812-1880).

- **Jacob Rodrigues Pereira** was a Spanish physician. He developed materials to help develop the senses, especially for the blind & deaf, as well as established a school in France in 1750 for such people.
- **Jean-Marc-Gaspard Itard** was a French doctor who started the study of a boy "*Wild Boy of Aveyron*" which led him to maintain the presence of developmental periods in normal human growth. He implied that in sensitive periods of a child, proper environment is needed in order to enhance his development, & that the advancement of disabled children is possible.
- **Edouard Seguin** was the other French psychologist who inspired Maria Montessori. He was the student of Itard and further worked on his research. He carried out Itard's ideas of daily education of handicapped children. Teens and Tens boards, were organized by Seguin which are widely used in Montessori Education.

On the work of these doctors, Maria took the real idea & studied handicapped patients with real eagerness. After the hard work of two years, those students were able to pass the standardized exams.

Maria's work gave strength to her ideas and she actively supported different social-changing movements. She was frequently invited as a guest speaker in all the Europe on the behalf of children's rights.

▪ Doctor to Educationist:

In 1900, Dr. Maria was appointed as the co-director of the Orthophrenic School, a medico-pedagogical institution. It was both an educational institute for special-needs children & a training institute for teachers. Making the school a success, Dr. Maria now believed that her method of educating special children could change the world of education. The idea of trying this new approach on typical children was also secretly establishing roots in her mind.



▪ **Casa dei Bambini – First Montessori House of Children:**



Montessori started her first school with normal children named Casa dei Bambini which was inaugurated on 6th January, 1907. It was located in the slum district of Rome. At the beginning, there were only 50 children aging two to five years, who were fully ignored by their parents & one untrained teacher.

Montessori developed her own education system in Casa dei Bambini. She presented hands-on materials to her students & the journey began. She introduced practical activities of daily life, e.g. cleaning, dressing, gardening etc. Children showed great progress & became more independent & efficient. She believed that the urges of the children are universal & that is in the nature of the child to perform such activities.

Maria spent night after night in discovering new materials which can help children in every subject. The children of Casa dei Bambini showed outstanding progress in their academic & practical work. They learnt a lot of activities related to writing & reading etc.

Soon her school became famous worldwide, & she was critically acclaimed and recognized by many political leaders and educationists alike. This is when the Montessori Method came into being for the academic world to follow.

▪ **Montessori Training Programs & Publications:**

After the success of Casa dei Bambini, Dr Maria Montessori felt the need for an effective & organized way of spreading her knowledge. She then conducted several teacher training programs in many countries, including USA, England, Spain & India. Montessori published her books as well on her supporters' demand.

List of Dr. Montessori's famous published works:

- *The Montessori Method (1909)*
- *Pedagogical Anthropology (1910)*
- *Dr. Maria's Own Handbook (1914)*
- *The Advanced Montessori Method (1916)*
- *The Child in the Family (1923)*
- *The Secret of Childhood (1936)*
- *Psychogeometry (1934)*
- *From Childhood to Adolescence (1948)*
- *Education and Peace (1949)*
- *The Formation of Man (1949)*
- *The Absorbent Mind (1949)*
- *Education for a New World (1947)*
- *To Educate the Human Potential (1947)*

■ Prime Time of Montessori:

From 1907 to 1930 is considered as the primetime for Maria as she studied about children & developed widely expanded techniques and method of learning. She also left her medical career & devoted herself to her goal of reproducing mankind.



■ The Decline & Revival of Montessori:

Thousands of Montessori schools were established by 1925 around the world, but suddenly things took a drastic turn by 1940. Due to World War-I & II (1914-1945), Montessori Movement almost disappeared from America & was declined in many other countries.

In 1922, Professor William Kilpatrick of Columbia University published a book entitled "*Montessori Re-examined*", in which he unfairly disregarded Montessori as outdated.

However, after the end of World War-II, Montessori movement began to revive in Europe. Since the 1960s, Montessori schools have expanded in both enrollment & the age-level service. Now, Montessori is the most wide-spread system at pre-school.



■ Awards & Recognitions:



Maria Montessori was pictured on the Italian 200 Lire coin & the 1000 Lire bill until Italy adopted the Euro. She was nominated thrice for Nobel Peace Prize (in 1949, 1950 & 1951) for her unrelenting efforts on behalf of children around the world.

▪ Montessori's Demise:



Dr. Maria Montessori left the world on 6th May, 1952 in Netherlands. She died in the company of her son, Mario, to whom she bequeathed the legacy of her work.

Dr. Maria will always remain unforgettable & stay alive as she lives immortal through her methods of education.

▪ Woman Ahead of Time:

Dr. Maria Montessori can be regarded as the pioneer of the modern education system & pedagogical wisdom based purely in science. She is immortal through her methods which are still being practiced now & will always in future also. Her unconventional methods & life have rightly earned her praise for being ***“a woman much ahead of her time”***.



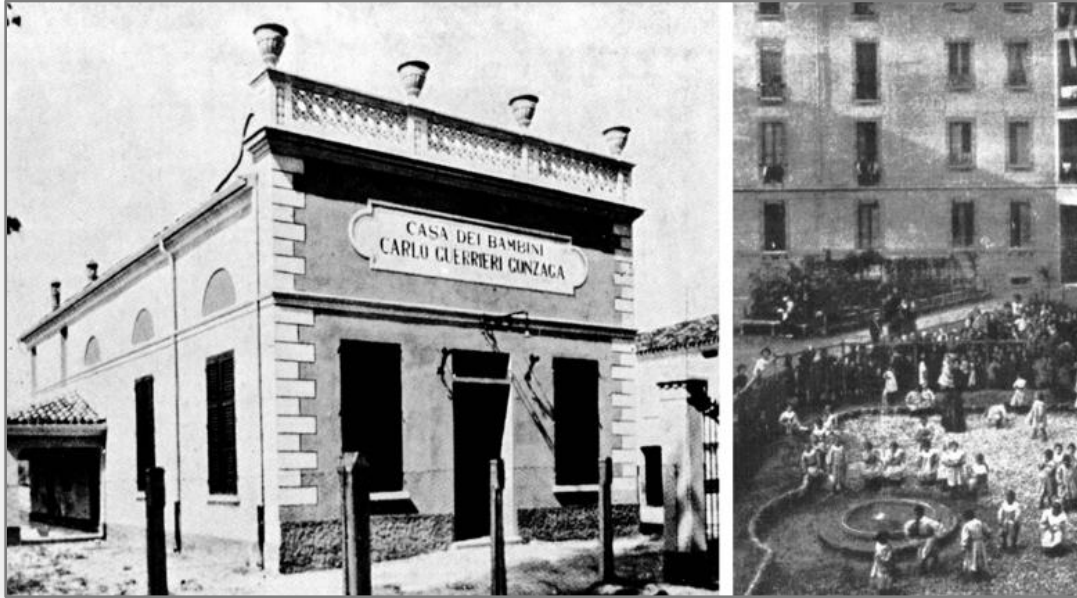
1870 - 1952

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Question-2: Write a note on the first Casa dei Bambini. Also explain how Montessori Method developed there.

▪ **Casa dei Bambini – First Montessori House of Children:**



In 1906, the Italian educator, physician, & scientist, Dr. Maria Montessori, who had just judged an international competition on the subjects of scientific pedagogy and experimental psychology, was invited to create a childcare center in San Lorenzo, a poor, inner-city district of Rome. There, she would be working with some of the areas' most disadvantaged and previously unschooled children. As Maria Montessori was becoming increasingly interested in using her educational approach with typical children, she grasped this opportunity, although many of her colleagues & family members were not in favor of this idea. She opened the doors of the center called *Casa dei Bambini* "Children's House" on January 6, 1907. The school was a single, large room with a fenced outdoor courtyard reserved for the working-class children, who were too young to attend public schools. At the beginning there were only around fifty to sixty children aging two to five years, with one untrained volunteer (teacher). The children stayed there from 9 am to 5 pm. They were given two meals and bathed regularly. These children came crying & resisting to school and were the worst example of poverty & ignorance by the parents. Most of them were disrespectful in behavior & hostile towards the environment, & were very difficult to handle.

▪ **Development of Montessori Method:**

Dr. Maria Montessori was going to develop her own system in Casa dei Bambini. She had no previous experience of teaching normal children, & had no pre-set plan of action or curriculum to suit the children's needs. At the moment she wasn't sure if her method would work.

Montessori began by teaching the older children how to help with the everyday tasks. She also introduced the hands-on materials of perceptual discrimination, puzzles & eye-hand manipulative exercises. The children showed animal-like behavior first, but gradually started settling down. Montessori introduced practical exercises of daily life, e.g. cleaning, dressing, gardening etc. The children soon showed great interest in working with puzzles, learning to prepare meals, clean their environment, and engaging in hands-on learning experiences. The younger ones learnt from the older children & began settling down as well. To her surprise, children aging 3 to 4 years took the greatest interest in learning practical everyday life skills. Thus came the idea to Dr. Maria Montessori, & began her journey of the **discovery of the child**, and like a scientist she started to **observe, hypothesize & experiment** new things with the children.

Dr. Montessori observed that before long, the children exhibited calm, peaceful behavior, periods of deep concentration, and a sense of order in caring for their environment. She saw that the children absorbed knowledge from their surroundings, essentially teaching themselves. The children, who used to run around in streets aimlessly, had turned to model of grace & courtesy in a very less time.



After around six months of the inauguration of the school, the mothers requested Dr. Maria to teach their children how to read & write. Though reluctant by their young age, she introduced the alphabet to the children, & to her extreme surprise, the children showed marvelous progress in literacy. Utilizing scientific observation and experience gained from her earlier work with young children, Dr. Montessori designed unique learning materials for them, many of which are still in use in Montessori classrooms today, and created a classroom environment that fostered the children's natural desire to learn.

The children were too young to go to public schools, yet were very eager to learn more. They took interest in numbers as well, thus the mathematically inclined doctor, Maria Montessori, developed concrete math learning materials. She observed that older children didn't take long to master addition & multiplication, & progressed to subtract, divide, skip counting and other advanced & abstract concepts.



Montessori discovered & believed that the urges of the children are universal & that is in the nature of the child to learn everything. She spent night after night in discovering new materials which can help children in every subject; geometry, geography, history & sciences. The children of Casa dei Bambini showed outstanding progress in their academic & practical work. They learnt a lot of activities related to writing & reading etc.

As Maria Montessori once said,

“Children read and do advanced mathematics in Montessori schools not because we push them, but because this is what they do when given the correct setting and opportunity. To deny them the right to learn because we, as adults, think that they should not, is illogical and typical of the way schools have been run before.”

Her work with the children in the first Casa dei Bambini became the basis of the development of Montessori Method. News of Maria Montessori's new approach spread rapidly, and hundreds of visitors arrived to see themselves the amazing progress & excellent behavior of the children. Soon her school became famous worldwide, & she was critically acclaimed and recognized by many political leaders, scientists and educationists alike. Within a year, the Italian-speaking part of Switzerland began transforming its kindergartens into Casa dei Bambini, & the spread of the new educational approach began.



In 1914, Dr Maria Montessori wrote,

“I did not invent a method of education, I simply gave some little children a chance to live.”

Montessori, when criticized for her method being too structured & academically demanding of young children, laughed out saying,

“I followed these children, studying them, studied them closely, & they taught me how to teach them.”

Question-3: Elaborate the discoveries made by Dr. Maria Montessori by observing the child.

Dr. Maria Montessori was the founder of Montessori Education. Maria Montessori made a lot of discoveries by observing the children. She conducted a lot of experiments and observed children by spending a lot of time with them. She discovered several aspects of children. She has specified some of the discoveries she had made during her work.

- **Children prefer Academic Materials over Toys:**

Dr. Maria Montessori discovered that children were more interested in developmental activities instead of showing interest in expensive toys. She noticed that the children like to work instead of playing & their attention towards toys was very short lived after which they get back to their Montessori materials and activities. Children have sense of priorities and they give priority to the activities which help them in learning skills and abilities.



- **Inner Need for Freedom & Constructive Work:**

The children were given some educational material to use for certain duration of time, but she found out that the children were keen to go on even after it was time to give them back. This so happened repeatedly that Dr. Montessori was compelled to believe that children love to do constructive work, & need freedom to work for as long as they want.

- **Ability to Select Activities:**

Dr. Maria Montessori made a great discovery that the children are proficient of selecting their own activities appropriate to their potential. She realized that they can choose activities according to their needs. They work because of their inner drives, natural motivation and predispositions.



- **Naturally Motivated & Do not Need Rewards:**

Dr. Maria Montessori discovered that children are indifferent to rewards and punishments, and they can be motivated through their inner needs and freedom. Children love to work with determination if it linked with the inner changing needs. They get naturally motivated without the need for any reward. They work because they love to work. She observed that rewards and punishments hindered the children's choice of activity and then she restricted from this practice.

■ Children Need Order:



Dr. Maria Montessori observed the children putting things back at their proper places after work. She further discovered that this need for order is not just limited to the designated places of objects in the environment. The children need order and consistency around them in everything. In short, a child's mind is focused on the development and inner construction of his intellectual and physical faculties. She believed that too much disorder may create a warp in the child's personality.

■ True Learning Happens with Concentration:

When something that answers the inner needs meets the child's eyes, spontaneous interest is kindled. Dr Montessori found that the children revealed they could work with concentration when they find the right conditions.

According to Montessori pedagogy, a three years old becomes a master of his hand and undertakes with joy a variety of human activities. These activities allow him to develop the power of concentration.



■ Purposeful Activities Lead to Normalization:

Dr Montessori found out that children deviate very often from normality, when they do not find proper conditions for development. She discovered that it is possible to correct any developmental error & bring the child back to normality by allowing him to work with appropriate activity for a reasonable time.

For example:

- *If a child shows tantrums, separate him from other children & make him busy in an individual purposeful activity.*
- *We shouldn't start counseling when the child is disturbed. Just find an interesting & purposeful activity & make him normal.*

- **Children Need Activities in Multiple Areas to Develop Fully:**



Dr. Maria Montessori discovered that children need a wide range of activities & experiences from multiple areas to develop fully & prepare themselves for life. For that, she developed several materials & activities in different areas including sensory stimulation, language & literacy, arithmetic, art, culture, mathematics & sciences. She did not impose her materials on materials, but the children themselves had natural inclination to work with them.

- **Children are Naturally Well-Behaving:**

Dr. Maria Montessori also discovered that the child is destructive, disorderly & uncooperative only when the suitable conditions are missing. She called it “*deviation*”.

She observed that the children showed orderly, responsible and caring behavior in her scientifically prepared environment. She witnessed this grandeur of human normality in her children, & found that under the right circumstances, the child naturally behaves well.

- **All Efforts to Grow are Efforts to Be Independent:**

Dr. Maria Montessori discovered that children need to do things on their own. As a parent & teacher, one of our most important jobs is to nurture our child own innate and development. Montessori believed in following the rule, “*Help Me Do it Myself*”, & that the accomplishment during this vital stage of development leads to an invaluable sense of confidence throughout life.

As Maria Montessori famously said,

“Never help a child with a task at which he/she feels can be succeed”

- **Children Need Respectful Treatment:**

Maria Montessori believed that a child not only needs to be loved, nurtured and cared for, but also respected. Demonstrating respect for your child early on helps them grow to be courteous, kind, thoughtful, and compassionate.

- **Real Obedience:**

Montessori believed that before children could learn obedience, they needed to be able to control their urges. As she stated, “If he cannot obey even his own will, he cannot obey the will of someone else.” At this stage, the child will be both obedient and disobedient to parent commands.

She discovered that when obedience leads to inner satisfaction, it becomes real obedience which is based on love, faith and respect, and hence it leads to real development.

- **Environmental Engineering:**



Dr. Maria Montessori discovered that the environment should never be underestimated. When the environment is carefully prepared, it becomes one of the teachers of the children. In the prepared environment, there are a variety of interesting things for a child to do. Maria Montessori had miniature pitchers, bowls, knives, trays, etc which could fit a child's tiny hands, & the material was placed in low accessible shelves. Montessori carried this environmental engineering throughout the entire school building and the outside environment. She further found that when restrictions imposed by adult sized environments are replaced by child sized environment, children can perform better and develop much faster.

- **True Discipline Comes from Freedom:**

Maria Montessori describes freedom and discipline as two essential factors that refer to the internal capabilities that human beings have to make choices and self-control their behavior. Therefore, the child is able to choose, act, and react to the consequences of their actions in conscientious agreement as their emotional and psychic development evolves. Throughout her writings, she gave many examples of her observations inside a Montessori classroom of her revolutionary approach to Education, usually by comparison to the traditional classroom setting, and proposes a paradigm shift: "to obtain discipline, give freedom."

- **Children are Underestimated:**

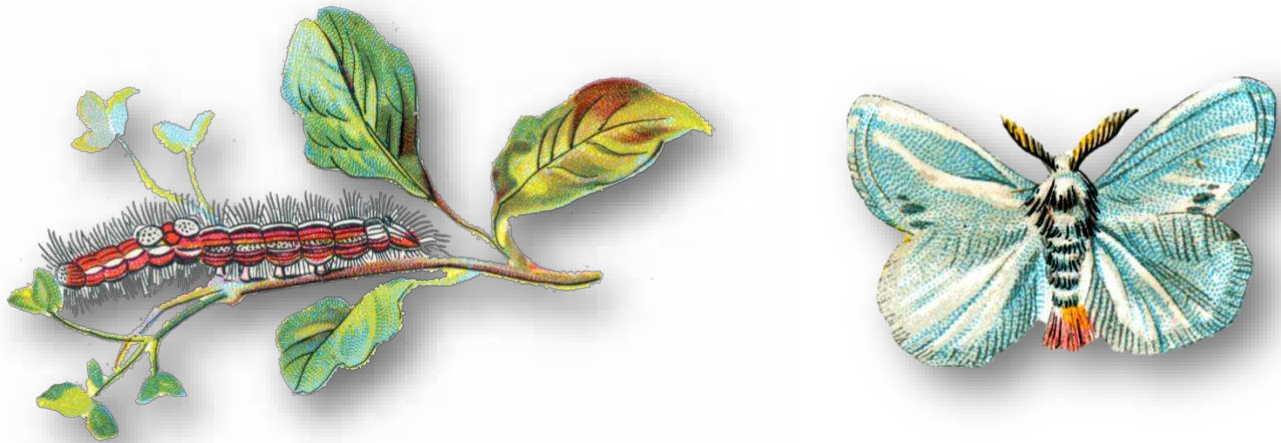
Dr. Maria Montessori made this discovery reluctantly, on the insistence of the parents of the children. She developed a systematic series of activities, starting from activities of motor control. She also found that children are ready to face challenges & ready to learn unbelievable things. Thus never underestimate the child.

Question-4: Explain Sensitive Periods and write short notes on the following;

Sensitive Period for Language – Sensitive Period for Mathematics – Sensitive Period for Movement

▪ **Sensitive Periods:**

The term “Sensitive Periods” was first used by a Dutch geneticist Hugo de Vries (16 Feb 1884 – 21 May 1935) He was working on the developmental stages in animals when he observed the lifecycle of the Porthesia Butterfly.



Later the term was adopted by Dr. Maria Montessori. She cited De Vries’ example of a sensitive period in the caterpillar of Porthesia Butterfly. Caterpillar is strongly sensible to light. It goes smuggling towards where the light is brightest.

Dr. Maria noticed that children develop tremendously in specific areas at specific times. She hypothesized that this sudden speed up in the learning process during specific times is due to the development of specific areas of the human brain which is called Nebulae. These specific times are common in children aging (0-6), and are called Sensitive Periods. Moreover, it becomes impossible to reach maximum potential if these periods are wasted.

Depending upon the mindset, we may refer to the sensitive periods as “a gift of God”. They are amazing windows of time when inner construction, development & learning take place at a great speed. During a sensitive period, the child feels a natural intense urge to indulge in certain experiences & activities repeatedly & with great concentration. A child also expresses signs of joy while performing activities relevant to his sensitive periods.

Thus, we can say that the purpose of sensitive periods in human beings is to help them reach their maximum physical & mental development along with equipping them with important skills.

However, if the restriction or deprivation of opportunities of necessary interaction with the environment during these periods may seriously hinder the natural process of development & learning in a child.

Dr. Maria identified eleven different sensitive periods occurring from birth through the age of six:

- *Order*
- *Listening & Spoken Language*
- *Writing*
- *Reading*
- *Movement*
- *Music*
- *Spatial Relationships*
- *Small Objects*
- *Senses*
- *Numbers*
- *Manners & Courtesies*



▪ **Sensitive Period for Language:**

Everyone would agree that children are surprisingly better at learning languages as compared to adults. The incredible lingual progress during the early years is because of the sensitive period for language development, which begins at around 7 months in the womb and continues till 6 years of age. During this sensitive period, when the brain is especially hard-wired to learn languages, the child learns all the aspects of the native language at a phenomenal speed with perfection.

This period is further divided into three sub-periods including the sensitive period for:

- *Spoken Language*
- *Writing*
- *Reading*

Sensitive Period for Listening & Spoken Language:

The sensitive period for spoken language starts at birth and continues till approximately 3 years of age. It begins when the child first creates sounds by mimicking mouth movements and progresses over time, as he learns to form words and simple sentences.

**Sensitive Period for Writing:**

The sensitive period for learning how to write is from 3.5 to 4.5 years of age. This begins when the child learns the alphabet and then right words, which form the foundation for reading and writing skills.

**Sensitive Period for Reading:**

For reading, a child is learning intensely from 4.5 to 5.5 years of age. Reading skills are often developed after a child learns to write as it involves visual tracking skills.



- **Sensitive Period for Mathematics:**

Our everyday life is surrounded by mathematics. According to Dr. Maria Montessori, the sensitive period for mathematics (numbers) is from 4 to 6 years of age. During this time the child is fascinated by numbers, quantities and mathematical operations. It seems as if the child's mathematical nature becomes suddenly active. He advances from the simple pursuit of sensory stimulations to a more specific new interest that includes counting, numerals and measurements. Maria Montessori discovered that the children of her school were eager to acquire the mathematical materials for long durations with utmost dedication and concentration in this sensitive period.



According to Dr. Maria Montessori, the child is born with a mathematical mind. She used the term “The Mathematical Mind” which refers to the unique ability of human mind.

Dr. Maria discovered that if mathematics is properly introduced during this sensitive period, the child develops a positive relationship with numbers, which goes for rest of his life. She believed the child is hand-minded and the hand is the instrument to his brain. So, all the early mathematical work is based on concrete hands-on experiences.

▪ **Sensitive Period for Movement:**



We all know that the child has unlimited energy to move. They are born with the sensitivities that drive them to be constantly on the move.

The sensitive period for movement occurs from birth to around 4.5 to 5 years of age. During this time, children are growing so much physically and mentally. The sensitive period for movement spans the development of all the movement up to the refinement of fine motor skills. The development and coordination of children's motor skills depend directly on how much they move & use their senses.

The sensitive period for movement is sub-divided into two classifications:

- *Acquisition of gross & fine motor skills*
- *Refinement of gross & fine motor skills*

The Sensitive Period to “Acquire” Gross & Fine Motor Skills:



For Acquisition of gross and fine motor (walking and the use of hands) is from birth to 2.5 years of age. This begins when the infant learns to crawl, pull up and eventually walks with or without assistance. Children also develop fine motor skills through repeating activities that strengthen their hand muscles and improve hand and eye coordination.

The Sensitive Period to "Refine" Gross & Fine Motor Skills:

Refinement and coordination of movement is from 2.5 to 4.5 years of age. This is when the child may start using both hands in coordination of fine movements, being able to hold small items with pincer grip and release voluntarily. Gross motor can be coordination of walking, running, balancing while carrying a jug of water and jumping. The child acquires this combination through repetition of purposeful motor activity. Regular visits to the park or outdoor environment is likely to help this sensitive period.



Question-5: Write short notes on the following core concepts of Montessori education;

Mixed Age Group – Spiritual Embryo – Absorbent Mind – Prepared Environment – Focus on Individual Progress

▪ **Mixed Age Group:**

Mixed-Age Classroom is one of the fascinating & unique features of Montessori System. Having children of more than one age & grade level together in one room has been a hallmark of the Montessori approach for more than 100 years. There is no segregation of children into grades. As the children get to be with students who may be younger or older than them, they naturally collaborate with and learn from one another.

There are seven levels usually found in a Montessori school that correspond to the developmental stages of childhood.

- **Level 1: Infants (birth – 1.5 years)**
- **Level 2: Toddlers (1.5 – 3 years)**
- **Level 3: Early Childhood (3 – 6 years)**
- **Level 4: Lower Elementary (6 – 9 years)**
- **Level 5: Upper Elementary (9 – 12 years)**
- **Level 6: Middle School (12 – 15 years)**
- **Level 7: Secondary (15 – 18 years)**



Benefits of Mixed-Age Classrooms

Observation: Younger children learn a lot by watching & imitating older children. In a mixed-age classroom, older children who are completing challenging lessons are an example to the younger children; they show what is possible.

Help: Younger children learn to receive help gracefully without feeling awkward, as well as tend to lend help to older children.

Socialization: In a Montessori classroom, better socialization takes place. Children of different ages work together and socialize happily; just as in real life we live in mixed-age groups in almost every aspect of daily life.

Consistency: As children stay in the same classroom with the same teacher, they experience consistency throughout the three-year period in terms of environment, teachers and their peers.

Discipline: Discipline improves as older children live by the code of conduct, the younger children don't have to be constantly reminded.

Opportunities for Leadership: Older students have the chance to become mentors to their younger classmates while learning & practicing important leadership skills. Younger children naturally look up to and follow older children, and so in a classroom with a range of ages, there are always opportunities for a child to "graduate" from observer to leader. Older students also find great joy in being trusted to teach their younger peers.

It's also a way for older students to build patience and empathy, as they learn how to help others by sharing expertise with tasks that they themselves have mastered.

Give & Take: The natural process of give-and-take easily takes place in mixed-age classrooms. When only same-aged children, having similar needs, are placed in a classroom, the natural give-and-take does not take place in its true sense. The materials in the classroom will also go scarce, as being used repeatedly by the children.

Strong Relationships: The children develop deep connections with their teachers, peers and the environment. They learn how to communicate openly, respect each other and build strong friendships.

Familiarity: The teachers get better acquainted with the children and learn their personalities, including developmental levels and learning abilities, as well as strength and weak areas, where kids may need assistance.

▪ **Spiritual Embryo:**

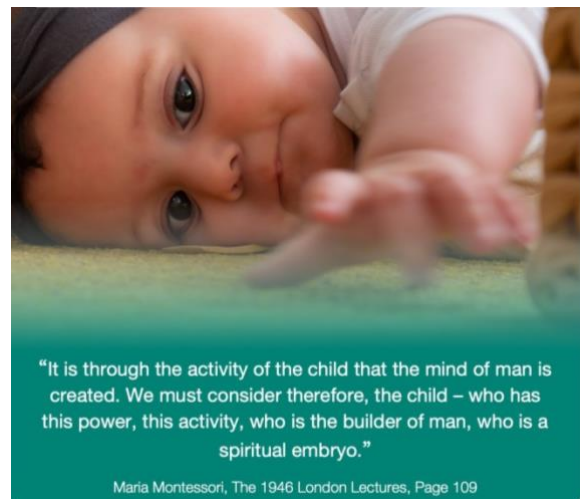
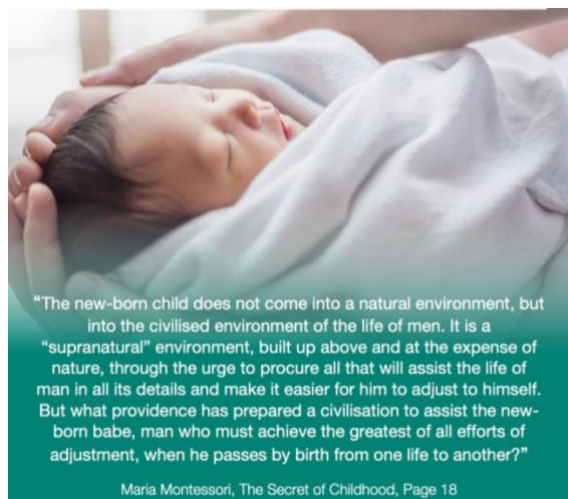
Maria Montessori suggested that human beings have two embryonic periods;

- **The physical embryo: Conception to 9 weeks**
- **The spiritual embryo: Birth to 3 years of age**

Maria Montessori introduced the concept of “**spiritual embryo**” explaining that the newborn has to do a psychological work as the embryo did a physical work. She insists on the word “formative” and calls the postnatal period, a “formative period” which it makes the baby in a kind of “spiritual embryo”.

Unlike other animals, the child is born as a spiritual embryo that has unique potentialities to acquire specialized behaviors & characteristics from the culture of the place where he grows. Dr Maria Montessori referred to these potentialities as nebulae. These nebulae of the spiritual embryo, his interaction with the environment, & the absorbent mind collectively determine as to;

- *how he will develop intellectually & spiritually*
- *what his personality will be like*
- *what his interests will be*
- *in which areas will he progress more rapidly than others*
- *what will be his strengths or weaknesses*
- *in which areas will he be more intelligent than others*



- **Absorbent Mind:**

The absorbent mind is one of the most important ideas in early childhood education. Maria Montessori presented this fundamental concept to the world more than a hundred years ago from her initial observations of children. The absorbent mind makes our adult lives possible. The absorbent mind is the sponge-like capacity to absorb from the environment what is necessary to create an individual from his or her specific culture. It is the quality of the child's mind up to the age of about six, when there is a transition to the reasoning mind we have as adults.

Every little child learns to speak his mother tongue. And no one teaches him the vocabulary, the grammar, or the syntax. It's a rather amazing achievement! If you have tried to learn a foreign language later in your life, you know it is not so easy. Yet every little child does it effortlessly. How? Through the absorbent mind! If the child is in an environment where he hears the language, he will speak it. As the child absorbs words and their meaning along with the context and the emotions behind the words, he begins to construct the ability to communicate.



Children absorb not only their language, but the traits of their families and communities. They learn how and what we eat, and how to behave in certain situations. Some of it is consciously taught, but a great deal of it is simply absorbed through this powerful child mind.

The absorbent mind is more like the camera. What the child takes in during the absorbent mind period is taken in effortlessly and remains as the foundation of his or her personality. What the child takes in later in the reasoning mind is taken in through conscious work and memory, and is not so foundational to the personality.

Montessori's understanding of the power of the absorbent mind in the first six years of life is a great gift. It teaches us that we can prepare a rich environment for the young child and, as he simply lives in the environment, he absorbs from it and learns. In the Montessori early childhood program for ages 2½ through 6, we introduce the children to all manner of interesting activities, including language, mathematics, the sciences, music, art, and geometry.

▪ **Prepared Environment:**

The Montessori classroom is referred to as **“the prepared environment”**. It is a meaningfully structured learning space where everything has a purpose and a place.



Scientifically Designed: Everything in Montessori’s prepared environment, including all the materials, relevant activities & underlying principles, has been scientifically developed by Maria Montessori after she observed her children & hypothesized about their developmental & cognitive needs.

Indoor Prepared Environment: Montessori environment is more like a house of children. It is a child-sized world, self-sufficient & complete in itself. Furniture is light and child-sized, learning materials are designed to fit in children's hands, and everything is designed to be open and accessible. There is a kitchen area equipped with child-sized tools & utensils, science lab/ table, different subject areas, an art studio, a library, peace corner, hobby workshop, & at least two bathrooms. There are two to three sinks, child-sized cleaning tools, gardening tools, pets to care for, plants to tend, places to rest & much more.

The Outdoor Prepared Environment: The Montessori outdoor prepared environment is an extension of the indoor prepared environment. The outdoor environment should focus on providing opportunities for:

- *care of the environment*
- *freedom of choice & child-led learning*
- *concrete & hand-on experiences*
- *gross & fine motor movement*
- *practical life skills*
- *creative play*
- *physical education*



There should be a garden where the children can grow flowers, fruits & vegetables. Spaces for physical activities such as running, playing, jumping etc should be made available. Some quiet places for meditation, contemplation, observing etc should be designed as well.

Access & Proportion: Montessori believed that a child must be free to explore and follow his own natural urges, thus developing his potential and increasing his knowledge of the world around him. Within the prepared environment, the child must experience freedom of choice, freedom of movement, freedom of exploration, freedom to interact socially, and freedom from interference from others. In a Montessori classroom, the furniture is light & child-sized, learning material fits in children's hands. Everything is designed to be open & accessible. Everything is placed in low shelves within the reach of the child.

Order in the Environment: As the sensitive period for order continues until five years of age, therefore, another important feature of Montessori's prepared environment is the constant maintenance of order. There is a place for everything, & everything has a place. The material placed at a particular spot on a shelf, stays there throughout the course of three years. The materials are arranged neatly on the shelves, & only a few items are placed on each shelf to avoid clutter.



Aesthetically Attractive: Dr Maria Montessori advocated that children should be provided with a beautiful, calm, & orderly environment. Classrooms should be kept simple & uncluttered. The walls should be painted in neutral colors. There should be nothing on the walls to over-whelm the children visually, for example: busy artwork, bulletin boards, alphabets etc. No blackboards are needed. Floor & table lamps should be used for a soft lightening effect. The emphasis should be the beautiful display of apparatus on the shelves.

Encourages Movement: Children are not meant to sit in a chair for long periods of time. Their growing bodies work best when they are able to move around. Montessori classrooms are designed to empower children and give them opportunities for movement on an individual and independent basis. In a Montessori classroom, children do not have assigned seats, but rather self-select. They also tend to move around quite a bit between using materials in order to experience variation. This teaches them to listen to their bodies and recognize when they need to stretch, when they need to rest, when they might work best with a friend, and when they require a bit of time alone.

Social Learning: Montessori prepared environment encourages social interaction between children. Where there is freedom to interact, children learn to encourage and develop a sense of compassion and empathy for others. As children develop, they become more socially aware, preparing to work and play in groups. This social interaction is supported throughout the environment and is encouraged with the nature of multi-age classroom settings.

▪ **Focus on Individual Progress:**

Every child is unique in terms of both physical & mental abilities. They have unique physical features, as well as unique cognitive, emotional, psychomotor and intellectual abilities. In the same way, in the Montessori's prepared environment students progress at their own pace, moving on to the next step in each area of the curriculum when they are ready. Each student is viewed as a distinct individual for the purpose of assessment and educational program planning.



Self-paced Individual Activities: In Montessori programs, children do not work for grades or external rewards, nor do they simply complete assignments given them by their teachers. Children learn because they are interested in things, and because all children share a desire to become competent and independent human beings. Most of the activities are done by the child individually, at his own pace, for as long as he likes. Teachers do not mold him according to their wishes; rather allow nature to work its magic.

No Competition: In Montessori houses, children are never compared with each other. Competition is discouraged & is replaced by cooperation, as:

Competition encourages "You lose, I win" situation.

Cooperation encourages "win win" situation.

The children naturally don't have negative traits. It is us, their elders, who instill those traits in them by comparing them with each other. Competition isn't a positive way to make them successful. It isn't healthy at all.

Superiority complex
Inferiority complex → *Unhealthy*

Montessori children are encouraged to treat one another with kindness and respect. Pursuing win-win situations will transform the world, rather than "I win you lose" situations.

No Tests & Examinations: The Montessori Method discourages the traditional measurements of achievement such as tests & grades since Maria Montessori strongly believed that learning is internal and takes place not because of some external force like reward, punishment or fear of examination but with personal effort. Montessori teachers maintain individual observation sheets & portfolios to keep an organized record of the children's progress, for guiding them better & communicating with parents.

No Reward or Punishment: Dr Maria Montessori prohibited the use of punishments & rewards of any kind. These work in adults' practical life, but young children don't need any reward, nor should be given any punishment as it can suppress child's inner urges. Children are naturally motivated, thus no appreciation is needed during activities.

To conclude, we can say that suppression of natural drives through classroom management techniques, rewards & punishments, or through any means have unhealthy consequences for a child passing through sensitive periods.

