



Montessori Method – Synopsis

Waterpark Montessori International & Montessori Palau

1st part: Background information, 1 page (this part should provide contextual information for the original creation of the method)

Biography:

Dr. Maria Montessori was born in Ancona, Italy in 1870. When she was twelve, the family moved to Rome. She grew up under the influence of a traditional father and an ambitious, strong-minded mother. She wanted to be an engineer but found that being a woman was an obstacle. However, she entered university and qualified as the first female medical doctor in Italy. Her years of study taught her to survive under difficult circumstances. The ethics of the time did not allow for male and female students to work on human bodies at the same time so Maria had to return to the morgue alone at night to do her research. When she qualified she worked for some time caring for the poor in Rome. She was always interested in children, their health and the living conditions that contributed to this. Around this time, she was also involved in the emerging movement for women's rights.

Dr. Montessori had a son in 1898 but the social structure at the time did not allow her to keep him with her as she was unmarried. Instead he was fostered by a family in the countryside and visited by his mother regularly. Dr. Montessori got a job working with children in an asylum for mentally retarded children. With her keen observational powers and her ever-curious mind, she became interested in their education as well as their health. She studied the works of Itard and Séguin, who in turn were influenced by Rousseau and Froebel. In order to understand these works fully she spent many long nights translating them from French into Italian! But her study was not in vain. She adapted and devised several educational materials which she used with great success with the children under her care. When they passed examinations, Dr. Montessori asked herself why the children in the regular schools could not reach much higher levels with good educational stimulation.

On 6 January 1907 Dr. Montessori opened her first Casa dei Bambini (Children's House) in Rome. The owners of a large tenement building were concerned about children running wild while their parents worked so they invited Dr. Montessori to carry out an experiment with a day nursery for children ranging



from 3 to 7 years. She set up a simple room and put in many of the educational materials which she had devised or adapted from others over the previous years. She employed the caretaker's daughter to take care of the children and instructed her not to teach them anything, but rather to allow them to use the materials. She herself observed for long periods and added or took away materials according to how the children were attracted to them. The children were shown how to use the materials and as long as they did not abuse them, were free to use them when they wished.

Within months wonderful things were happening. Children were starting to write their names, to talk about mathematical shapes, to behave very politely and all sorts of other exciting things. People heard about Casa dei Bambini and came to see the children. In a world where children were considered noisy and troublesome, these productive well-behaved little people were seen as a miracle. A second nursery was opened by Dr. Montessori the following year. Within a short time, she was becoming well known throughout most countries in Europe. In 1912 she published her first of many books, "The Montessori Method". In 1913 she was invited to the USA where she travelled widely, taking her now fifteen-year-old son, Mario, with her. There she was welcomed enthusiastically and set up many 'Montessori' classrooms.

*In the meantime, she was training teachers to carry on her method but at all times she was reluctant to allow this training to pass out of her personal control. She believed that her method was not easy to adopt correctly because it involved a basic shift in attitude towards children. **Her observations were continually leading her to adapt and develop new materials.** She started to work on the method for older children (6-12 years) as far back as 1912 but believed that it was too big a task for one person. With the help of various interested people, the 'Advanced Montessori Method' was developed over a period of many years. Dr. Montessori was also interested in the next level (12-18 years) but she did not have time in her busy life to explore this fully. However, it has been developed since her death, particularly in the USA and Holland.*

She worked for some years in Spain and spent all of World War II in India. She finally settled in Holland and there, with the help of her son Mario and his wife, set up a centre for developing the Montessori method. Then in the latter part of her life, Dr. Montessori went back again to the infant and further developed her ideas on the first years of life. She published "The Absorbent Mind", the book many consider to be her best, in 1949, just a few years before her death, in 1952.



In what social/historical/pedagogical context was the method invented?

The method was created first to help the special needs children of Rome, who society first thought could not be educated. It was then developed for “street” children, who lived in the slums of Rome and usually came from illiterate families. The underlying belief was that all children want to and can learn if given the freedom and tools to do so.

How has the method developed from its creation up to now?

Dr. Montessori died in 1952 but her philosophy is ever more relevant in the new millennium. The world is changing rapidly, people's lives are changing rapidly and what is needed from education is a format for helping people to cope with all this change. Research is moving forward so fast that it is difficult for any individual to keep up to date except in a very specialised area. What children need to take from their education is the skill to learn all the time, an interest in learning and the self- confidence and self-discipline to manage this learning. The Montessori Method has offered one of the means of filling this need and that explains the upsurge in popularity for Montessori education in the last few decades.

Dr. Montessori established AMI (Association Montessori Internationale) in Holland but there were several other centres, including St. Nicholas in London, delivering training for Montessori teachers even at the time of her death. Since that time many other Montessori organisations have been established. The largest of these is AMS (American Montessori Society) in the USA. In 1998 St.

Nicholas and London Montessori Centre amalgamated to become the Montessori Centre International (MCI). Having been active in Norway since 1991 under the auspices of St. Nicholas, Waterpark Montessori was established in 1999. Waterpark Montessori has continued to train Montessori teachers in Norway and internationally. In 2018, Waterpark Montessori was awarded international accreditation by MACTE (Montessori Accreditation Council for Teacher Education). The Montessori Palau School began in 1967 and since 1990s, the School is transformed with a new style of teaching with the application of the Montessori Method. This started with the training of the teaching staff in the certification from the Association Montessori Internationale (AMI). The implementation of the Montessori Method, together with the teaching innovations and educational research, has resulted in the Montessori Palau School becoming a centre of international renown with more than one thousand pupils.

The Montessori curriculum is constantly being changed and adapted to suit local needs and the needs of the children. But it is only in marginal items that changes are made. The original philosophy and materials are still intact and taught by most training courses. Teachers need to have a deep understanding of both the philosophy and the materials so that they can interpret them correctly as they use them with the children in their care, whether they are from the north of Norway or the heart

of Africa. In this way the true Montessori method can be carried throughout the world and adapted to every culture without losing any of its original advantages.

Modern Research & Montessori

In 2005 Angeline Stoll Lillard, (daughter of the well-known Montessori author, Paula Polk Lillard) published a ground breaking book explaining Montessori education in the light of modern research. She identifies eight principles of Montessori education and then analyses each in the light of current research. Montessori education scores very well in this analysis, showing how children’s development benefits throughout childhood when educated in a well prepared Montessori environment. (Lillard, A, 2005) Lillard, in further research, also identifies the importance of Montessori schools following what she refers to as “classic Montessori”. In “classic Montessori” there are no additional materials, no additional adults, a very structured environment, objective demonstrations and freedom of choice. This is something we all need to keep in mind as we develop the Montessori method for modern times.

Bibliography: Lillard, Angeline Stoll, 2005 - Montessori, the Science Behind the Genius, Oxford University Press, New York.

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2nd part: description of the method, 5 pages (this part should provide a comprehensive understanding of the method)

Who does the method target? If there is more than one target, in what ways does the method vary according to the target it addresses?

The Montessori Method is applicable to all ages. However, in her lifetime, Dr. Montessori focused most attention on children aged 3-12. Her followers continued to develop her method for children 0-3 years as well as adolescents 12-18 years. There are many core principles that apply to all ages, and some that apply more for specific age groups.

Dr. Montessori identified stages of development. She believed that these stages were radically different from each other and that children go through a kind of metamorphosis as they pass from one to the next.

The first stage, 0-6 years, is characterised by an absorbent mind and much change. The second stage, 6-12 years, is characterised by a highly creative imagination and a great interest in the social group. It is a stable time. The third stage, 12-18 years, is a time of much change, the emergence of sophisticated rational thinking and huge physical, hormonal and emotional changes. Montessori, in some of the charts she drew, included a further stage, 18-24 years, in which the young person becomes a fully functioning member of society.

Basic human tendencies have been identified by anthropologists and others studying human nature. Dr. Maria Montessori observed children and noted that they were attempting to fulfil their human tendencies through work. At the different stages of development children manifest these tendencies in different ways. Dr. Montessori noted that it was important that the correct environment was provided for each stage in order to allow the tendencies to be fulfilled.

Dr. Montessori believed that the human race had special tendencies, which made it possible for them to do special things. Much of her work with children drew out these points, making it apparent how children could develop these tendencies to their fullest potential and thus improve the lot of the human race. She identified eight human tendencies: exploration, orientation, order, work and activity, repetition, exactitude and precision, communication, and imagination.

What are the core principles? Describe each of them.

Montessori's method of education is based on a strong philosophy about the nature of the human being, in particular the child. She had many principles in her philosophy and on those core principles

her method of education was built.

The Absorbent Mind

*In her book *The Absorbent Mind*, Dr. Montessori compares the work done by the child in the first six years to that done by university students. She points out that the child does a greater work, and that these first years form the most important part of life. Intelligence, the full psyche, personality, “mental muscles” are all formed from the world around the child. (Montessori, M., *The Absorbent Mind*, 1988) Mental muscles are things like “memory, the power to understand and the ability to think” (Montessori, M., *The Absorbent Mind*, 1988). This amazing type of mind literally absorbs the information of the environment effortlessly, just like a sponge. The child is likened to the photographer while the adult has to laboriously paint or draw his scene.*

The child absorbs much information in the first two and a half to three years into the unconscious mind. This is stored in the mneme, a preconscious memory. What is stored here is not just put away for future use; it is used to actually create the personality. Adults have experiences and remember them. Children under three years absorb experiences in their very beings.

*Between two and three years the child starts to make conscious what was unconscious. The hand has an important part to play in this, and you will notice young children deeply engrossed in something that involves the use of their hands. “The hands are the instruments of man’s intelligence” (Montessori, M., *The Absorbent Mind*, 1988)*

This sponge-like absorbent mind is the secret of the child’s ability to learn so much so fast. The learning takes place from what is around in the environment. The child is driven to seek knowledge and experience from the environment by the hormone. This is a pre-will energy, which urges the child to move, explore, touch, taste, test and so on. The hormone is usually much stronger than the need to please adults. Parents need to understand this drive and not try to contradict it by admonitions and threats. The child is only following her nature.

The Tools to Create a Personality

*Dr. Montessori stressed that human children, unlike other species, have to “shape and co-ordinate [their] own movements (Montessori, M., *The Absorbent Mind*, Chapter 7, 1988). The first three years are the time for creation and co-ordination of the personality. The absorbent mind, driven by the hormone, is one of the tools, which the spiritual embryo uses for this task. Sensitive periods also play an important role in this process, as do “nebulous urges” which have an energy that will interact with the surroundings in which the child finds himself.*

Movement in Education and the Importance of the Hand

Dr. Montessori emphasised movement as being the basis of all learning, especially in the first three years of life. She stressed that without movement the child was limited in her ability to seek out and receive the necessary sensory stimulation for all development. Lack of freedom of movement also restricts the child's powers of self-expression and interaction with others. Montessori believed that mental work should also enjoy "sensations of truth and beauty". (Montessori, M., The Discovery of the Child, Chapter 6, 1966)

Dr. Montessori also placed great emphasis on the use of the hands in learning. She said all animals could walk, but it was the human ability to use the hand for precise tasks that led to the development of civilisation. She talks about how man's "hands under the guidance of his intellect transform this environment and thus enable him to fulfill his mission in the world" (Montessori, M., The Secret of Childhood, Chapter 12, 1966). In her observations of children Dr. Montessori saw that the adult restriction on children's freedom to touch and handle things in the first few years was the cause of so many developmental problems, both intellectual and emotional. She said that if the intelligence develops with the hand it reaches a higher level and the character will be stronger. (Montessori, M., The Absorbent Mind, Chapter 14, 1988).

Montessori stressed this point about movement in learning for the younger child but in practice, freedom of movement is basic to the Montessori method at all ages. The involvement of the whole body and, in particular the hand, is essential for learning to take place effectively and efficiently. It is not enough that we provide physical education for part of the day and then confine children to desks while they "learn" intellectual things! The school age child needs movement while learning, in order to help concentration to take place and to help with coordinating the rapidly growing body. The adolescent needs movement to be part of learning in order to help co-ordinate the body during the changes of puberty and to help improve focus and concentration as they struggle to find new ways of relating to the world physically, mentally, and socially.

Social Development

Concentration as a Basis for Social Development

Dr. Montessori believed that the development of the personality was indeed social development. She pointed out that concentration was the basis of the social being and character. (Montessori, M., The Absorbent Mind, Chapter 22, 1988)

When a child learns to concentrate, she gains self-control and can co-ordinate her own personality. This is the basis from which she can relate to others in a good way. Dr. Montessori did not think we should admonish children with phrases like "be kind to others" because children will do that anyway

if their own basic developmental needs are satisfied. We should concentrate on providing these needs and allow the child to develop her own personality, including social skills.

Learning Social Behaviour from the Environment

One of the main means of developing social skills is by watching others, therefore, the child is learning from the environment. Parents and care-givers should take young children to real life social situations. Bring them to the shop, the workplace, on the bus, to family parties and so on. A child's greatest learning happens at these times.

Older children and adults also learn social behaviour from watching others but as Dr. Montessori pointed out again and again, these skills cannot be learned only by watching. Practice in real situations is also essential.

The 6-12 Year-Old and Social Development

The younger child's focus is not on social life. Individual development is more important than social life, but some really important social skills are being acquired. When a child passes 6 years she develops a huge interest in social structures, in particular groups. She wants to be a member of a group, to be part of making the rules and selecting a leader. Now the child learns how to behave within a group. The rules become interesting in themselves. They are an important part of learning how to identify with a group.

The 6-12 year-old also learns about morality. Morality is based on group norms and rules. The child starts to become very interested in what is right and what is wrong. In the beginning the view is that all morality is completely black and white. Through the period 6-12 years they start to understand the morality of the culture they live in.

The Adolescent and Social Development

The adolescent is in a special phase where social development is about finding out who she is and especially what her role in society is. She has moved her interest from the small group to the larger society. She explores society to see how she fits in, how the rules affect her and of what importance she is. Montessori pointed out that the emotional equilibrium that the adolescent is seeking as she grows into an adult, can only come about in situations that allow her to develop naturally and practice her emerging adult social skills. She suggested activities that focused on allowing this young person to develop the social skills she will need in adulthood.

Independence as an Educational Goal

Montessori had clear principles on independence, freedom and discipline and self-responsibility.

Understanding of these principles is at the centre of making the Montessori method of education work in practice. The first thing is to understand the philosophy behind these principles.

*What kind of freedom do we offer the child? There must be some limits to freedom. However, limits to freedom do not mean that we cut down on the freedom in a negative way, rather we offer limits as a positive means of feedback. The freedom itself must be complete. One of the most important quotations from Dr. Montessori explains this: “.. we say the child’s freedom must be complete, that his independence and normal functioning must be guaranteed by society” (Montessori, M., *The Absorbent Mind, Chapter, The Child’s Conquest of Independence, 1988*)*

Managing freedom is learned by getting feedback from consequences or the limits of the world. Dr. Montessori believed that error was such a natural part of life and such a wonderful learning mechanism that she deliberately built a ‘control of error’ into her materials. The control of error has another side benefit. It becomes a point of interest in itself. It encourages concentration.

When children are given freedom and are allowed to develop independence they will firstly learn self-discipline. Out of this will grow self-responsibility. Independence is essential to develop self-responsibility.

To what subject matters is the method best adapted?

The Montessori Method is best adapted to all subject areas.

Dr. Montessori had a deep philosophy that underlies one of the main principles used in Montessori schools over 6 years, cosmic education.

The cosmic plan is the name given to the plan which governs everything in the entire cosmos. The cosmic plan includes everything from the nature of the developing child, to the rising of the sun each day, and to the strange behaviour of plants in the Amazon. Above all it is about the manner in which all things in the cosmos are connected, connected to each other and connected to the plan.

Cosmic education is what Dr. Montessori devised as a method to present the cosmic plan to children and to use it as the chief means of their education in the period 6-12 years. In the first place she believed that an understanding of the cosmic plan was essential to all people and in the second place that the child aged 6-12 is ideally suited to this kind of learning. She also used cosmic education as a basis for her plan for educating adolescents, but in a slightly different way. She even suggested we use a cosmic approach within a sensorial framework for the preschool children. To Montessori a cosmic approach was the most natural and basic approach to all education.

*Dr. Montessori wondered ceaselessly at the incredible intelligence behind this cosmic plan, its beauty and its order. Her theories on the child and the inbuilt mechanisms for development are closely connected to the existence of such mechanisms throughout the cosmos. Her main controversial theory around the cosmic plan was about the place of 'man' (humankind) in this plan. She believed that the special intelligence given to humans had an enormous impact on the evolution of the earth. She saw this as a positive impact of which humans were sometimes unaware. She points out that cosmic theory gives recognition to humanity for all its efforts, while religion attributes everything to the mercy of God. She said that humans were involved in the creation of this 'one organised energy', but seemed to fret about their useless efforts. She spoke about our inability to understand that the whole of humanity is one organised energy. (Montessori M., *The Child, Society and the World*, 1989)*

Dr. Montessori said this in 1946. Many years later there is strong evidence that her vision was absolutely right. Human consciousness is indeed expanding rapidly towards this universality. And amongst other things, the Internet is one of the tools that humans invented that created a leap in this development.



3rd part: case study 3 pages (this part should help partners understand how the method could be practically implemented).

*The first and most important case study was conducted by Dr. Maria Montessori herself, in her work with underprivileged children in Rome. She opened her first Casa dei Bambini in 1907 and in all the years following, she relied heavily on her scientific observation of children and their interaction with the classroom environment and her didactic learning materials. It is from this that she wrote extensively and thereby presented her method to the international community. Much of her observations and discoveries can be read in her book, *The Absorbent Mind*.*

Other case studies:

Lillard, A.S. & Else-Quest, N., [“Evaluating Montessori Education,”](#) *Science* **131**: 1893-94 (Sept. 29, 2006).

Researchers compared Montessori students with students in other school programs, and found that 5-year-old children who completed the three-year cycle in the Montessori preschool program scored higher on both academic and behavioral tests than the control group. The study also found that 12-year-old Montessori students wrote more sophisticated and creative stories and showed a more highly developed sense of community and social skills than students in other programs.

Diamond, A., [“The Evidence Base for Improving School Outcomes by Addressing the Whole Child and by Addressing Skills and Attitudes, Not Just Content.”](#) *Early Education and Development*, **2**: 780-793 (2010)

Dr. Adele Diamond, Professor of Developmental Cognitive Neuroscience at the University of British Columbia, is one of the world’s leading researchers on the development of cognitive function and a supporter of Montessori education. In this article she discusses effective strategies for advancing academic achievement, and advises: “Programs that address the whole child (cognitive, emotional, social and physical needs) are the most successful at improving any single aspect – for good reason. For example, if you want to help children with academic development, you will not realize the best results if you focus only on academic achievement (though at first glance doing that might seem the most efficient strategy); counterintuitively, the most efficient and effective strategy for advancing academic achievement is to also nurture children’s social, emotional, and physical needs.”

[Tierney Tobin; Prairie Boulmier; Wenyi Zhu; Paul Hancock; Peter A. Muennig](#), 2015, “Improving Outcomes for Refugee Children: A case study on the impact of Montessori education along the Thai-Burma border.” *International Education Journal: Comparative Perspectives*, v. 14. <https://doi.org/10.7916/D82V2GHJ>

Abstract: There are 25 million displaced children worldwide, and those receiving schooling are often educated in overcrowded classrooms. Montessori is a child-centred educational method that provides an alternative model to traditional educational approaches. In this model, students are able to direct their own learning and develop at their own pace, working with materials rather than in supervised groups or with direct teacher instruction. Because most children are working alone, teachers have more



time to work one-on-one with children even when student-teacher ratios are quite large. This gives teachers increased opportunity to tailor their teaching to the specific needs and strengths of each student. We conducted an evaluation of Montessori classroom conversion for displaced students on the Thai-Myanmar border. We administered the Ages and Stages Questionnaire (ASQ) to 66 children before and after classroom conversion and across treatment and control classroom conditions. We then conducted difference in difference testing. All domains showed meaningful improvements in ASQ scores, with the Montessori students gaining 18 points relative to the traditional students ($p = 0.33$). However, only the personal-social domain of the ASQ was statistically significant (8.8 point gain for the Montessori students relative to the control, $p < 0.05$) in our underpowered sample.

Why would the method be particularly suitable for the target group of MONTECH?

Montessori's original research was done with children from significantly underprivileged backgrounds, with great results. Using the Montessori principals approach, children will be enabled to develop their own capacities, and learn about themselves and about their culture, in one environment based on respect to their own interests. Using this approach will also highlight the commonalities between cultures and all humans. These things will help to create a less traumatic transition into a new way of life.

Mainstreaming Montessori and Creative Technology methods

As this project is looking to combine the principles of the Montessori and the Creative Technology Methods and implementing in mainstream schools, we cannot expect each of the core principles to be upheld. However, there are many principles that can be adapted to the project and be implemented by the teachers in their classrooms. We are not able to implement the entire curriculum in the training time available, but together with the Creative Technology method we can create a method of how to implement creative technologies in the multicultural classroom.

Creative Technology is a hands-on approach to learning through discovery and therefore directly in line with the Montessori learning materials. The focus of the project will be to incorporate the learning into mainstream classrooms using Montessori core principles.



4th part (this part should provide additional information to further study the two different methods)

Standing, E.M. *Maria Montessori Her Life and Work*
Biography of Dr. Maria Montessori.

First published 1957

Montessori, Maria *The Absorbent Mind*

First published 1949

Core principles of Dr. Montessori's work and details of her initial research with children. Based on the lectures given by Dr. Maria Montessori at Ahmedabad, during the first training course to be held after her internment in India, which lasted till the end of World War 2.

Montessori, Maria *From Childhood to Adolescence*

First published 1948

In this work, Maria Montessori examines the educational concerns of the older child, the adolescent, and even the mature university student. She considers each level and seeks the optimum method of facilitating growth.

Lillard, P.P. *Montessori Today: A Comprehensive Approach to Education from Childhood to Adulthood*

First published 1996

Paula Lillard, director of a Montessori school ranging in age from 18 months to fifteen years, provides a clear and cogent introduction to the Montessori program for the elementary and later years. In detailed accounts, Lillard shows how children acquire the skills to answer their own questions, learn to manage freedom with responsibility, and maintain a high level of intellectual stimulation by using the Montessori method.

Healy Walls, Clare *At the Heart of Montessori Series*
waterparkbooks.com

First published 2008

At the Heart of Montessori series provides a thorough and easy-to-follow explanation of Maria Montessori's philosophy and educational method for all ages from birth to adolescence.

Healy Walls, Clare *The Conscious Parent in Action*

waterparkbooks.com

A specially designed handbook for use with teachers and parents. Stories and discussion to help adults become more conscious in their attitudes and behaviours with children.

There are many other texts published by Dr. Montessori which provide much insight into her method.

Montessori & Technology:

Jones, S.J. (2017). Technology in the Montessori classroom: Teachers' beliefs and technology use. *Journal of Montessori Research*. Vol. 3 (1).

MacDonald, G. (2015). Technology in the Montessori classroom: Benefits, hazards and preparation for Life. *AMI/USA Journal*, 3rd Edition.

Montessori, M. (2015). Some observations on technology. *AMI Journal*.

Valle, M. (2017). La pedagogia Montessori e le nuove tecnologie: Un'integrazione possibile? (Italian Edition). Il leone verde Edizioni. Kindle Edition. ISBN: 978-88-6580-199-4

Webster, R. (2019). Using cosmic education to aid the development of capable and conscientious technology users in the late second plane. *AMI/USA Journal: Fall 2019*

