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## Teachers Who Do Not Teach. To Be a Teacher in the Montessori Elementary Learning Environment

Nauczyciele, którzy nie uczą.

Być nauczycielem w przygotowanym do uczenia się  
otoczeniu elementarnej szkoły Montessori

### KEYWORDS    ABSTRACT

Montessori education, Montessori teacher, elementary school, learning environment, teaching-learning process, iconographic research, empirical research

After a brief introduction to the Montessori model of education (psychological foundations, guiding principles, distinctive features), the Author's contribution is aimed at giving a satisfactory representation of the Montessori teacher, in particular the one dealing with learners at the elementary school stage. The framework is developed using a selection of sources belonging to three different types: Montessori's writings, visual materials, empirical data. Each section collects specific material with the intention of bringing it to the attention of the reader, allowing wider reflection from different points of view. The triangulation of the proposed contents and data is seen as a method for considering this complex but fascinating teacher profile both in its theoretical specificities and in its operational qualities in the context in which the teaching-learning process takes place. The desired overall results should allow a greater focus on the profile and role of the Montessori teacher in the elementary school as well as giving the reader himself the opportunity to elaborate further reflections and conclusions independently.

## SŁOWA KLUCZOWE ABSTRAKT

edukacja Montessori,  
nauczyciel Montessori,  
środowisko uczenia się, proces nauczania-uczenia się, badania ikonograficzne, badania empiryczne

Po krótkim omówieniu modelu edukacji Marii Montessori (podstawy psychologiczne, zasady postępowania, cechy wyróżniające) autorka stara się zaprezentować wyczerpujący opis roli nauczyciela Montessori, zwłaszcza na poziomie szkoły elementarnej. Opracowane w tym celu ramy opisu obejmują selekcję materiałów należących do trzech źródeł: oryginalnych pism M. Montessori, materiałów wizualnych (ikonograficznych) oraz danych empirycznych z badań własnych. Każdy z wymienionych działów zbiera materiały o wysokiej jakości z intencją skoncentrowania na nich uwagi czytelnika i poddania ich szerszej refleksji z różnych punktów widzenia. Triangulacja proponowanych treści i danych jest tu postrzegana jako metoda badania złożonej, lecz fascynującej charakterystyki profilu nauczyciela, zarówno w aspekcie jego teoretycznych właściwości, jak i operacyjnych cech działania ujawnianych w kontekście procesu nauczania-uczenia się. Głównym celem analizy jest głębsze skoncentrowanie się na profilu i roli nauczyciela Montessori w szkole elementarnej, a także umożliwienie czytelnikowi samodzielnej, pogłębionej refleksji nad zagadnieniem i niezależnego formułowania własnych wniosków.

*The mediocre teacher tells.*

*The good teacher explains.*

*The superior teacher demonstrates.*

*The great teacher inspires.*

(William Arthur Ward, 1921-1994)

In this contribution we will try to give a satisfactory representation of the issue under discussion by taking into consideration different kinds of sources which offer materials for reflection from varying but complementary points of view (historical, visual, empirical). After a brief introduction concerning the main features of Montessorian pedagogy, we will carry out the discussion considering a selection of sources within the following three areas:

1. Montessori's writings;
1. Iconographic sources;
2. An empirical survey.

We will then try to make a triangulation between the data obtained in order to derive some conclusions.

## 1. What is a Montessori school? A brief introduction

### a) The psychological foundations of the Montessori school

Perhaps the greatest contribution of Maria Montessori, doctor and scientist, was the creation of a pedagogical approach derived from knowledge of the phases of evolution that regulate the development of the individual. The individual must be helped in the realization of his “development plans” by providing functional answers to the basic needs expressed by him. In fact, the child is not “something small that increases always preserving the same form [...] but there are different types of psyche and mind in the different periods of life.”<sup>1</sup> The different periods of which Montessori speaks are early childhood, childhood, adolescence and maturity. The differences found between them are so marked as to be compared to those that, on the structural and functional level, are typical of metamorphosis. This also means that they are among themselves in a relationship of interdependence, for which each constitutes the basis on which the next one is inserted.

The following figure (Figure 1) reproduces an interesting graphic representation of the “four plans of development” elaborated by Maria Montessori during the training courses held in Perugia in 1950. In the graph, the upper part shows “the constructive rhythm of life” composed from the different levels of development; the lower part represents the current educational system and expresses Montessori’s critique of it; the terms “causality” and “purpose”, placed at the top and bottom respectively, express: with the term “causality”, a traditional view of the teaching in which the teacher is the exclusive source of knowledge without which the child cannot learn; with the term “finality”, the definitely different approach of Maria Montessori that sees the acquisition of the knowledge on the part of the child as an active construction process through the experience in the environment.

The upper horizontal line indicates the chronological age of the individual. As we can see, it goes from birth to 24 years according to a development that is divided into periods of six years each. The flame placed at the beginning, represents the vital charge that characterizes the psychic life at its birth. The four planes are graphically represented by the same number of identical triangles that illustrate, in a particular way, the vital role exercised by the sensory periods, that is from those periods in which development suddenly progresses so intensely that the child’s being is concentrated to take possession of a certain concept or a certain action. Sensitive periods change nature from one stage to another, determining the characteristics of each phase: they occur, reach a peak, then disappear, making room for other sensitivities and so on. In this way they determine the development and guide its rhythm.<sup>2</sup>

<sup>1</sup> M. Montessori, *From Childhood to Adolescence*, Amsterdam 2007.

<sup>2</sup> M. Montessori, *The Secret of Childhood*, New York 1982.

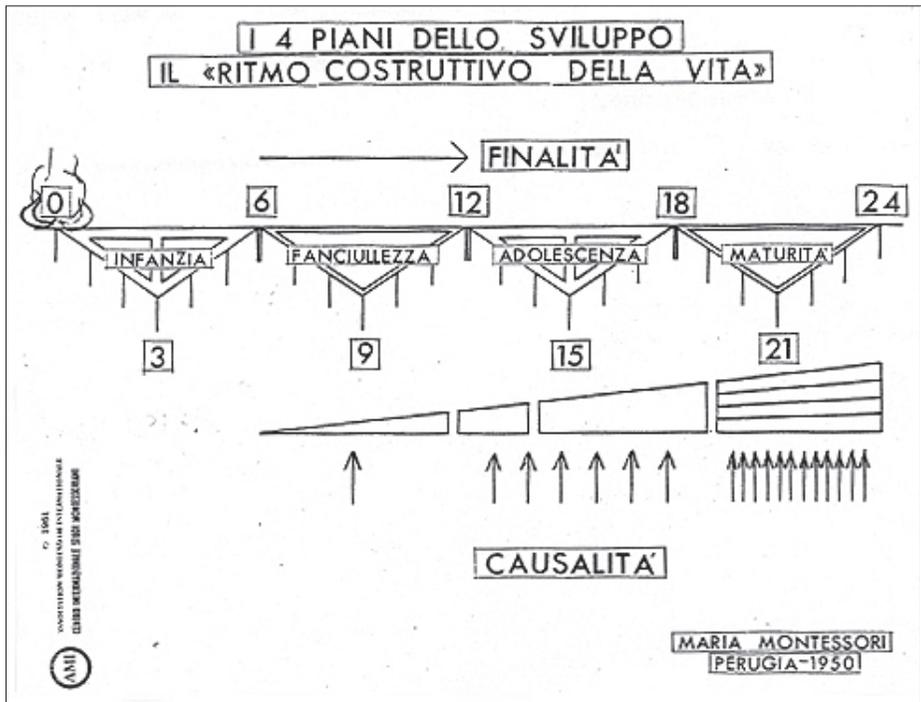


Fig. 1 - *Graphic representation of the constructive rhythm of life.*<sup>3</sup>

The four planes are distinguished by their different colors: the first and the third are red (early childhood and adolescence); the second and fourth are blue (childhood and maturity). This chromatic difference indicates differences and similarities between them: the triangles in red, which are also subdivided and delimited by lines, represent the creative periods of development; while the triangles in blue, which are undivided and delimited by thin lines, represent the phases defined by Montessori as “calm phases of uniform growth”.

## b) Guiding principles of the Montessori pedagogy

Starting from such a premise of a psychological nature, the scientific pedagogy of Maria Montessori is based on the centrality of the child in the learning environment. We summarize schematically some conceptual nodes within her vision of education:

<sup>3</sup> C. Grazzini, B. Krumins, *I quattro piani dello sviluppo*, “Il quaderno Montessori”, 13 (1996), No. 51, p. 95.

1. The child, says Montessori in her anthropological vision of the human being, is “the builder of man”. Its development embodies human evolution destined to achieve balance and harmony. The way in which, within this conception, the child is able to follow its development, directly influences the ways in which men are in relation to each other or the way of organizing the society. Montessori was therefore of the opinion that, by organizing education in a certain way, social improvements could be achieved. The anthropological ideas at the base of her work, in fact, have direct consequences on the pedagogical concept.
2. Around the child there is the prepared environment: it is a “place of nourishment” for the child and, as such, it must be organized on the basis of specific characteristics related to the age of the child, at his/her stage of development, to allow him/her to conduct productive experiences and to work independently. In an appropriately organized environment, the child is left free to move, to organize and self-manage his/her activities.
3. The adult. He/she is the organizer of the learning environment and a careful and constant observer of the child’s behavior within it. Furthermore, the child begins to exercise a certain skill by the adult presenting him/her individually the material of development that is associated with it; he/she “intervenes” to facilitate the child’s correct and effective use of the material or work strategy; he/she “supports” the child in the choice of materials and in self-employment. He/she is also a member of the group and therefore responsible, together with the children, for the care of the prepared environment and the social climate that develops within it.

A survey conducted in the past in some creches<sup>4</sup> located in Rome (Italy), has identified and highlighted ten key principles<sup>5</sup> at the base of the Montessori educational project, considering them a valid summary of theoretical reference at the base of the whole Montessori education path from 3 to 11 years. The Montessori’s key principles are listed as follows:

1. The child is seen in his/her entirety and uniqueness;
2. The environment is designed as an open path, always available to children, prepared in advance and continuously supervised by adults;
3. The child is the protagonist. The adult acts as a guide and a point of reference;
4. Attention is directed to the individual. The growth of relationships among children, as a progressive cohesion due to a good integration of the individual, is considered a point of arrival;

<sup>4</sup> Centro Nascita Montessori (edited by), *La qualità del nido: rilevazioni e proposte su uno sfondo montessoriano*, Bergamo 1994. Translation by the Author.

<sup>5</sup> The basic principles are the ideal guidelines, considered as a basic support for educational behaviors, and representative of the image of one’s service.

5. Autonomy is understood as personal growth, as an internal thrust of development and ability to choose in all circumstances;
6. “Self-help” aid is constantly planned and prepared in the environment, to encourage personal choice and activities;
7. The intervention of the adult is given to foster, if possible, the autonomous solution of possible conflicts and requests for help;
8. Education is intended as a response to the needs of an individual full of original skills: his or hers are the rhythms and the results achieved;
9. The child is attracted to objects, “the voice of things”, and chooses by himself what interests him/her;
10. The development process, understood as a progressive ability to choose, to fulfil personal experiences, to communicate and elaborate concepts, has a priority value. What the child learns is considered primarily the fruit of his/her direct experience. The adult adapts and fits into the child’s choices.

### c) Distinctive features of a Montessori school

It is, however, in everyday practice at school that the principles mentioned above have to be fulfilled. Let’s briefly see how, referring in particular to the elementary school segment. The didactic action of the elementary school is linked to that already carried out in the Children’s House, becoming its direct and logical continuation. They are not separate institutions because the same principles are applied continuously and progressively and the transition from one to the other takes place insensibly. While keeping the principles fixed, it is natural that the educational and didactic action of the elementary school is adapted and gradually transformed in response to the changing needs of the child’s evolution. As a consequence, the teaching methods change, as well as the organization of the school environment, the choice of the culture material, and the attitude of the teacher who has to follow the student’s requests, giving him/her the keys (tools) to conquer a vast cultural heritage.

Without prejudice to the principles of the freedom of the child, the non-intervention of the teacher or, better, the rightly weighted intervention, changes the environment and changes the type of development material.

In the elementary school there are also books, those of real culture destined to stimulate interest and to arouse the desire for further study and research: history, geography, science, literature, etc. In addition, concerts for music education, visits to museums of natural history and art, possibly illustrated by specialists of various subjects, characterize the outdoor activities to which Montessori gives enormous importance as for elementary school children, also in order to establish the value of the relationship existing between the various subjects (cosmic education). The interest of

the child is aroused and oriented by means of collective lessons, given, when possible, and for certain topics, by people of proven competence. These lessons, for which there can not exist a predetermined program, since they must be directed from time to time to the topics that prove most attractive to children, must highlight, every time, a fact or a natural phenomenon or human being seen in the general framework of life.

The environment, on the other hand, must ensure that the child is able to move to achieve intelligent goals. These aims refer both to the conservation of the order in the environment (practical life activities required by the needs of life in the school), and to all other possibilities of movement that allow children to freely exercise their intellectual faculties and enable continuous collaboration between teachers and children, and among children. Therefore, while the external attractiveness of the environment is very important in the Children's House, in the elementary school the environment must offer a rich choice of reasons related to the various aspects of culture, object of studies and research purposes.

The teacher has an extremely delicate and difficult function: he must promote the interest of children and provide them with all those elements necessary for their intellectual development and the conquest of knowledge. The teacher then enriches and broadens the environment for the exploration and research of the child, obtaining texts of science, possibility of experiences on nature and "going out" from the school, having certain purposes of observation and study made possible by having the child already taken the "cultural key" for such study and observation.

## 2. Montessori's writings. The teacher and its topicality

Teacher's profession is one of the most interesting, but also demanding professions. Continuously emerging issues in the actual pedagogical-educational debate, that are extremely important, refer, for example, to discussion areas such as: teachers' skills and competencies; the role of the adult/role of the teacher; finding ways to enable teachers to become reflective practitioners, who are skilled in linking and implementing theory and practice. Nowadays, teachers absolutely have to take into account and be informed about: a) current brain research; b) the most recent discoveries in education, psychology, neurobiology, medicine and sociology; c) modern developmental psychology. They must show a comprehensive base of knowledge for working in modern educational facilities that want to match the educational requirements of the 21<sup>st</sup> century; they must act as an actual role model for children and youth with regard to learning, researching and discovering; they must express joy and passion; they must demonstrate inclusion efforts; they must show a holistic educational approach; they must be skilled in classroom management and communication; they must be

skilled in curriculum design and innovative curriculum development; they must care about and practice reflection on the teacher's role in the modern education context; they must be aware of contemporary research and able to constantly re-examine their basic educational theories and classroom practice. The modern teacher must also show a solid knowledge concerning the teaching-learning process and some consolidated concepts on the term "learning" with reference to the "subject-learner" placed at the centre of the teaching-learning process. The key-concepts the teacher should take into account to design an effective educational intervention, are<sup>6</sup>:

- Learning is more effective when the subject is motivated to learn;
- It is easier to learn comprehensible tasks than incomprehensible tasks;
- Reinforcement or information on the quality of behavior improves learning (feedback);
- Active learning is more effective than passive learning;
- The importance of the exercise for most of the learning processes is undisputed;
- Gradual learning is more effective than concentrated learning;
- The learning of a totality is more effective than the sequential learning of the parts that make up the whole;
- Discourse on a given cognitive field does not make learning much easier.

What has been mentioned up to now is valid for the figure and the role of the teacher *tout court*. For the Montessori teacher specifically, we may say that already in 1898, on the occasion of the first Italian Pedagogical Congress held in Turin, Maria Montessori had the opportunity to express herself, very courageously and clearly before a large audience, about the role of the teacher: «It was in 1898 that the first Italian Pedagogical Congress was held in Turin, and it was attended by about three thousand educators. Under the spur of a new passion, that made me foresee the future mission and transformation of a chosen social class, setting forth upon a glorious task of redemption - the class of educators - I attended the Congress».<sup>7</sup> The central themes of the Congress were: a) the role of educational institutions; b) the training of the educators' class; c) social problems.

According to us, when we are talking about the work of Maria Montessori, the necessary step to get material for the discussion is to start from the reading and analysis of her original sources of thought. Therefore, in conducting our research path, we use these original sources to help us and readers to consider her model of education in theory and practice, through in-depth reflection. We are referring here to a selection of Montessori's writings in which the Montessori elementary teacher profile is more explicitly presented. The selection we made comprises seven titles within which we

<sup>6</sup> Petter G., *Il mestiere di insegnante*, Firenze-Milano 2006.

<sup>7</sup> M. Montessori, *Pedagogical Anthropology*, New York 1913, p. 15.

have selected some significant pages referring to the issue under investigation. The seventh title is an exception: we will not mention the pages selected directly as chosen extracts. We only recommend to read those pages because they may be useful to learn about the spiritual formation of the teacher according to Montessori.

The seven titles examined are:

- 1) Education and Peace<sup>8</sup> [p. 47; p. 56; p. 57; p. 77; p. 82; p. 106];
- 2) To Educate the Human Potential<sup>9</sup> [p. 1; p. 5; p. 11; p. 17-18; p. 42-43; p. 55; p. 77-78; p. 83-84];
- 3) From Childhood to Adolescence<sup>10</sup> [page before p. 1; p. 1-2; p. 3; p. 5; p. 6; p. 7; p. 9; p. 11; p. 20; p. 23; p. 58; p. 85];
- 4) The Advanced Montessori Method I<sup>11</sup> [p. 66-67; p. 99; p. 100; p. 101-103; p. 103; p. 107-108; p. 109; p. 109-110];
- 5) The Child, Society and the World<sup>12</sup> [p. 17-18; p. 61; p. 65; p. 65-66; p. 69; p. 74-75];
- 6) The Discovery of the Child<sup>13</sup> [p. 150; p. 151; p. 161; p. 162; p. 166; p. 157-159, The Three-period Lesson (no quotations extracted)];
- 7) The Secret of Childhood<sup>14</sup> [p. 203-208, no quotations extracted].

As one may notice, all the selected titles but one were published after the middle 1930s. This is why even if the first experiments concerning the organization of the elementary Montessori school took place just few years before the publication of Montessori's *L'autoeducazione nelle scuole elementari. Continuazione del volume Il metodo della pedagogia scientifica applicato all'educazione infantile nelle Case dei Bambini/ The Advanced Montessori Method (Scientific Pedagogy as Applied to the Education of Children from Seven to Eleven Years)* - (1st edition in Italian, 1916; 1st edition in English 1917-1918), it took time for Montessori herself to find the opportunity to supervise the complete process while she was giving her teacher training courses around the world. After the 1916 publication, the first elementary Montessori classes multiplied in Italy and abroad, taking years of experiments in schools until the model was developed up to the whole elementary cycle (children aged 6 to 11/12).

<sup>8</sup> M. Montessori, *Education and Peace*, Amsterdam 2007, 1<sup>st</sup> edition in Italian, 1949.

<sup>9</sup> M. Montessori, *To Educate the Human Potential*, Amsterdam 2007, 1<sup>st</sup> edition in English, 1948.

<sup>10</sup> M. Montessori, *From Childhood to Adolescence*, Amsterdam 2007, 1<sup>st</sup> edition in French, 1948.

<sup>11</sup> M. Montessori, *The Advanced Montessori Method. Spontaneous Activity in Education*, Amsterdam 2007. 1<sup>st</sup> edition in English, 1917-1918.

<sup>12</sup> M. Montessori, *The Child, Society and the World. Unpublished Speeches and Writings*, Oxford 1989.

<sup>13</sup> M. Montessori, *The Discovery of the Child*, Amsterdam 2007, 1<sup>st</sup> edition in English, 1948.

<sup>14</sup> M. Montessori, *The Secret of Childhood*, New York 1972, 1<sup>st</sup> edition in English, 1936.

1) Education and Peace (1. ed., Italian, 1949)

EXTRACT	PAGES	CHAPTER
«Education is enormously important today, because man possesses much more than he knows and much more than he can enjoy. He has everything! He must learn to appreciate what he has, to enjoy what he already possesses». [p. 47]	p. 47	5. Why may education have an influence on the world today?
«Education must concern itself with the development of individuality and allow the individual child to remain independent not only in the earliest years of childhood but through all stages of his development. Two things are necessary: the development of individuality and the participation of the individual in a truly social life. This development and this participation in social activities will take different forms in the various periods of childhood. But one principle will remain unchanged during all these stages: the child must be furnished at all times with the means necessary for him to act and gain experience. His life as a social being will then develop throughout his formative years, becoming more and more complex as he grows older». [p. 56]	p. 56	7. The form education must take to be able to help the world in our present circumstances
«It has been said that man's greatest delight is to possess things. No! Man's greatest delight is using them! Using them to perfect himself and at the same time to improve his environment». [p. 57]	p. 57	7. The form education must take to be able to help the world in our present circumstances
«The child must be able to act freely in such an environment. There he must find motives for constructive activity that corresponds to his developmental needs. He must have contact with an adult who is familiar with the laws governing his life and who does not get in his way by overprotecting him, by dictating his activities, or by forcing him to act without taking his needs into account. In such an environment, the child proves to be something quite different from a creature who enjoys wasting time and wants to do nothing but play. He becomes an individual who works very hard, who is very observant, who is not destructive». [p. 77]	p. 77	11. My method
«Learning means working long and hard. There are children who go through long arithmetical operations because they find them really fascinating. I once saw a child multiply a thirty-two-figure number by a twenty-figure number. Such operations are so tiresomely complicated that we adults would find them tedious, but the child does them for the sake of doing them, spontaneously. Both the younger and the older child feels a need to do exercises over and over, and to follow their own path of development by their own means. From another point of view, school would seem to be the place where man develops through acquiring culture. But culture is a <i>means</i> , not an end. Properly understood, this fact makes the work of teachers, professors, and parents much easier and completely changes our ideas about education». [p. 82]	p. 82	11. My method

EXTRACT	PAGES	CHAPTER
«Just as we have built an environment that answers the needs of small children, so we must prepare an environment in the outside world that will foster social education for older children». [p. 82]	p. 82	11. My method
«This is the mission of education. Let us therefore unite our efforts to construct an environment that will allow the child and the adolescent to live an independent, individual life in order to fulfil the goal that all of us are pursuing – the development of personality, the formation of a supernatural order, and the creation of a better society. The human soul must shape itself within a supernatural milieu». [p. 106]	p. 106	14. The education of the individual

## 2) To Educate the Human Potential (1. ed., English, 1948)

EXTRACT	PAGES	CHAPTER
«The secret of success is found to lie in the right use of imagination in awakening interest, and the stimulation of seeds of interest already sown by attractive literary and pictorial material, but all correlated to a central idea, of greatly ennobling inspiration – the Cosmic Plan in which all, consciously or unconsciously, serve the great Purpose of Life». [p. 1]	p. 1	Introduction
«Our teaching must only answer the mental needs of the child, never dictate them. Just as a small child cannot be still because he is in need of co-ordinating his movements, so the older child, who may seem troublesome in his curiosity over the what, why and wherefore of everything he sees, is building up his mind by this mental activity, and must be given a wide field of culture on which to feed. The task of teaching becomes easy, since we do not need to choose what we shall teach, but should place all before him for the satisfaction of his mental appetite. He must have absolute freedom of choice, and then he requires nothing but repeated experiences which will become increasingly marked by interest and serious attention, during his acquisition of some desired knowledge». [p. 5]	p. 5	1. The six-year-old confronted with the cosmic plan

EXTRACT	PAGES	CHAPTER
<p>«The teacher is confronted with an individual who has already acquired the basis of culture, and is anxious to build on it, to learn and penetrate deeper into any matter of interest. How clearly then lies the path before the teacher; it would almost seem that he has nothing to do! Not so; the teacher's task is no small or easy one! He has to prepare a huge amount of knowledge to satisfy the child's mental hunger, and he is not, like the ordinary teacher, limited by a syllabus, prescribing just so much of every subject to be imparted within a set time, and on no account to be exceeded. The needs of the child are clearly more difficult to answer, and the teacher can no longer take refuge behind syllabus and timetable. He has himself to acquire a reasonable acquaintance with every subject, and even then only the outer shell of the problem will have been pierced. But let him take courage, for he shall not be without help, and a scientifically devised and tested plan». [p. 5]</p>	p. 5	1. The six-year-old confronted with the cosmic plan
<p>«The secret of good teaching is to regard the child's intelligence as a fertile field in which seeds may be sown, to grow under the heat of flaming imagination. Our aim therefore is not merely to make the child understand, and still less to force him to memorize, but so to touch his imagination as to enthuse him to his inmost core. We do not want complacent pupils, but eager ones; we seek to sow life in the child rather than theories, to help him in his growth, mental and emotional as well as physical, and for that we must offer grand and lofty ideas to the human mind, which we find ever ready to receive them, demanding more and more». [p. 11]</p>	p. 11	2. The right use of imagination
<p>«The child will have the greater pleasure in all subjects, and find them easier to learn, if he be led to realize how these subjects first came to be studied and who studied them. We write and read, and the child can be taught who invented writing and the instruments wherewith we write, how printing came and books became so numerous. Every achievement has come by the sacrifice of someone now dead. Every map speaks eloquently of the work of explorers and pioneers, who underwent hardships and trials to find new places, rivers and lakes, and to make the world greater and richer for our dwelling». [p. 17-18]</p>	p. 17-18	3. The new psychology of the unconscious

EXTRACT	PAGES	CHAPTER
<p>«Though charts have been prepared extensively to enable the child to get some realization of the nature and rates of living progress, it is no part of the Montessori method that he be asked to memorize names or dates; he is merely to be interested in seeing how evolution has continually been accelerated in its processes. Seeds of interest have first to be sown in the child's mind – easily transplanted if first in the teacher's – and all must be ready for the full answering of his questions when he seeks further knowledge. Children like at first to place pictures separately prepared on blank charts, showing epochs only, and realization is helped by the isolation of difficulties, one thing at a time being presented to their consideration, to avoid confusion. There is no interest for the child in a tangled skein of facts, to be memorized and recited in order. Some new educationists, in reaction from the latter, advocate giving him freedom to learn only what he likes, but with no previous preparation of interest. That is a plan for building without a basis, akin to the political methods that today offer freedom of speech and vote without education; the right to express thoughts where there are no thoughts to express, and no power of thinking! The necessity for the child, as for society, is help towards the building up of mental faculties, interest being first of necessity enlisted, that there may be natural growth in freedom. My desire is to restore sight to the blind, that they may see for themselves, perhaps more than I am capable of seeing. Such is the love of a mother who helps her child to walk alone, though he may use his power to run from her». [p. 42-43]</p>	p. 42-43	9. The Earth in travail again
<p>«Man finds himself no longer limited to his hands for the accomplishment of his desires, for he has machines. Supernature is now his background of potentiality. A wider, loftier life is his than ever before, and children have to be prepared for it, so the fundamental principle in education is correlation of all subjects, and their centralization in the cosmic plan». [p. 55]</p>	p. 55	12. Man the creator and revealer
<p>«The modern teacher must be an enthusiastic student of biology, and of the psychology of the growing child, and so of the man. The "school" must mean something else than a place of instruction, where the one teaches the many, with pain on both sides – an effort carrying with it little success». [p. 77-78]</p>	p. 77-78	18. Man – whither bound

EXTRACT	PAGES	CHAPTER
<p>«It has been assumed throughout this book [To Educate the Human Potential], that teachers taking Montessori classes of the advanced type will previously have been familiar with the primary course, in which psychology necessarily plays a bigger part in preparation for the whole method. So there has been less emphasis here on the attitude expected of the teacher towards the children in his or her care, and some concluding reminders may not be out of order. In the advanced as in the primary stage, the first step to take in order to become a Montessori teacher is to shed omnipotence and to become a joyous observer. If the teacher can really enter into the joy of seeing things being born and growing under his own eyes, and can clothe himself in the garment of humility, many delights are reserved for him that are denied to those who assume infallibility and authority in front of a class. Such teachers suffer from illusions, being far from the truth. They agree that it is necessary to cultivate the will in children, for spontaneous interest, but contend that it must be strictly controlled and restrained. That is a contradiction in terms; you cannot develop by repression. Unluckily, logic does not function in people who suffer from illusions, so these teachers enter the school and begin to carry out their contradictions. They do the easiest thing – repress, command, destroy! Destruction is easily and quickly done, whether the structure is simple or complex; anyone can do it! But how difficult is it to construct!». [p. 83-84]</p>	<p>p. 83-84</p>	<p>19. Conclusion</p>

3) From Childhood to Adolescence (1. ed., French, 1948)

EXTRACT	PAGES	CHAPTER
<p>«My vision of the future is no longer of people taking exams and proceeding on that certification from the secondary school to the university, but of individuals passing from one stage of independence to a higher, by means of their own activity, through their own effort of will, which constitutes the inner evolution of the individual». [page before p. 1]</p>	<p>Page before page 1</p>	

EXTRACT	PAGES	CHAPTER
<p>«Successive levels of education must correspond to the successive personalities of the child.</p> <p>Our methods are oriented not to any pre-established principles but rather to the inherent characteristics of the different ages. It follows that these characteristics themselves include several levels. The changes from one level to the other at these different ages could be compared to the metamorphoses of insects. [...] We can establish a parallel between the life of the insect and that of the child. But the changing traits are not so clearly defined in the child as in the insect. It would be more exact to speak rather of “rebirths” of the child. In effect, we have before us at each new stage a different child who presents characteristics different from those he exhibited during preceding years.</p> <p>1. Our first level of education, then, applies to the small child from birth to about seven years of age. Since a number of transformations take place during this important period, we have established the following subdivisions: a) the first two years; b) the years from three to five; c) the sixth and seventh years.</p> <p>2. For the period from seven to twelve years – the period immediately preceding adolescence – which may also be subdivided, we provide a different plan of education than for the preceding period. If the changes produced during the first period are considered as growth, it may be said that veritable metamorphoses take place during this one.</p> <p>3. Twelve to eighteen years: one could say as much for this, the period of adolescence.</p> <p>In each period we rediscover a growing being, but one who is a quite different person every time. The last two levels will be considered consecutively. The first level has already been discussed in <i>The Discovery of the Child</i> and in <i>The Secret of Childhood</i>. Only a thorough analysis leads to the discovery of the changes that occur continuously in the child, who grows until he becomes a man. It is precisely these changes that have the greatest bearing on the method of education. The principles that can be applied usefully to the first period are not the same as those that must be applied to the second. We thus come to the practical part of education». [p. 1-2]</p>	p. 1-2	1. The successive levels of education
<p>«From seven to twelve years, the child needs to enlarge his field of action. As we have seen (in <i>The Secret of Childhood</i>), a limited environment is suited to the small child. There, social relations are established with others. In the second period, the child needs wider boundaries for his social experiences. Development cannot result by leaving him in his former environment». [p. 3]</p>	p. 3	2. Metamorphoses

EXTRACT	PAGES	CHAPTER
«The passage to the second level of education is the passage from the sensorial, material level to the abstract. The need for abstraction and intellectual activity makes itself felt around the seventh year. Until that age the establishment of the relationships between objects is what is important to the child. This is to say that the child needs to classify and absorb the exterior world by means of his senses. A turning toward the intellectual and moral sides of life occurs at the age of seven». [p. 5]	p. 5	2. Metamorphoses
«The seven-to-twelve-year-old period, then, constitutes one of particular importance for moral education. The adult must be aware of the evolution that is occurring in the mind of the child at this time and adapt one's methods to conform with it». [p. 6]	p. 6	2. Metamorphoses
«The three characteristics we have just isolated for examination – the child's felt need to escape the closed environment, the passage of his mind to the abstract, and the birth in him of a moral sense – serve as the basis for a scheme of the second period». [p. 7]	p. 7	3. The moral characteristics of the child from seven to twelve years
«As in the first period: we seek the child's consent to receive a lesson given. The lesson is now abstract when earlier it was sensorial». [p. 9]	p. 9	3. The moral characteristics of the child from seven to twelve years
«It is, however, precisely up to the adult to assist the child's development by creating an environment adapted to his new needs. Just as it is necessary to help the baby while he is taking his first steps, so is it also necessary to help the child while he is taking his first steps in the world of abstraction. Education ought to be a guide in this more critical period of life and of school. The teacher must again be made aware of his limitations, as we have already established with regard to the teacher of the smaller child. For the small child, he had to "count his words". Here he must be sure of what he ought to do or say, and of the extent to which he must reply to questions. He must be clearly conscious that his duty is to say little; to say only what is true, but not the whole truth in all its details. He must now also say what is "necessary and sufficient". It is indispensable to the child to feel the security the adult can and must give». [p. 11]	p. 11	4. The needs of the child from seven to twelve years
«The role of education is to interest the child profoundly in an external activity to which he will give all his potential. We are concerned here with bringing him liberty and independence while interesting him in an activity through which he will subsequently discover reality. And for the child this is the means by which he may free himself from the adult». [p. 11]	p. 11	4. The needs of the child from seven to twelve years

EXTRACT	PAGES	CHAPTER
<p>«In Genesis it says: “God created the heavens and the earth”. It is a very simple statement but it has grandeur, and the mind stays awake. When details are presented as being parts of a whole, they become interesting. The interest increases in proportion to the gain in knowledge. In addition, the knowledge presented now must not be the same scale as before. It must not be purely sensorial anymore. Now the child must have constant recourse to his imagination. Imagination is the great power of this age. Since we are unable to present everything, it is up to the child to use his imagination. The instruction of children from seven to twelve years of age must appeal to the imagination. A configuration of reality must spring from the imagination. It is necessary therefore to be strictly precise. Exactness, as a numeral and as all that makes up mathematics, will serve to build that configuration of reality. Now what is it that strikes the imagination? Above all, grandeur and, next, mystery. The imagination is then able to reconstruct the whole when it knows the real detail». [p. 20]</p>	p. 20	5. The passage to abstraction – the role of the imagination, or “going out”, the key to culture
<p>«All is strictly interrelated on this planet. And one notes that each science studies only the details of a total knowledge. To speak afterward of the life of man on the surface of the globe is to speak of history. And each detail holds the child’s interest by reason of its strict relation to the others. We may compare it with a tapestry: each detail is a piece of embroidery; the whole constitutes a magnificent cloth. To give the child of seven to twelve years the idea of a whole in nature, for example of the planet on which we live, we must begin by bringing him numbers. To do well, it is necessary to aim at giving an idea of all the sciences, not in precise detail but only as an impression. The idea is to “sow the seeds of the sciences” at this age, when a sort of sensitive period for the imagination exists. Once the idea has been presented, we must show that a science extends from each branch: mineralogy, biology, physics, chemistry, et cetera. And, as we have seen, the examination of a detail triggers the study of the whole». [p. 23]</p>	p. 23	5. The passage to abstraction – the role of the imagination, or “going out”, the key to culture
<p>«Then, by determining the correlation between things with the child, and thereby obeying an essential impulse of the human mind, we create a philosophy for him. And why may not the child philosophize? Since the human mind is mathematical and philosophical, we try, in reasonable proportions, to turn it toward mathematics and philosophy. Here is an essential principle of education: to teach details is to bring confusion; to establish the relationships between things is to bring knowledge». [p. 58]</p>	p. 58	Conclusion

EXTRACT	PAGES	CHAPTER
<p>«Our experience with children in elementary schools has shown us that the age between six and twelve years is a period of life during which the elements of all sciences should be given. It is a period that, psychologically, is especially sensitive and might be called the “sensitive period of culture” during which the abstract plane of the human mind is organized. It is then that everything should be sown. This interesting period in the organization of the human soul could be compared to a field where the seed of all those plants that one wishes to flourish in the future must be sown. The aim of education must be that of finding all the possible means to “plant the seeds” in the suitable epoch. Not only secondary schools, but also universities must interest themselves in this sowing, even if the interest in lower schools is felt to be out of their realm». [p. 85]</p>	<p>p. 85</p>	<p>Appendix C. The functions of the University</p>

4) The Advanced Montessori Method I (1. ed., English, 1917-1918)

EXTRACT	PAGES	CHAPTER
<p>«It is evident that some <i>external</i> basis is necessary in the progressive development of such phenomena, and that the teacher who is to respond to the requests of the child in conscious evolution, cannot do so adequately by haphazard means; he must be guided by conditions previously determined by experience. In other words, those external means already alluded to several times, that <i>staircase</i>, the steps of which lead the soul upwards, must have been already <i>established by experience</i>, just as all the preceding means of the first development of the infant were established. [...] The highest external organization is not based solely upon psychological necessities, but also upon those factors which take into account the cultural aspect itself. Each subject of study, as, for instance, arithmetic, grammar, geometry, natural science, music, literature, should be presented by means of external objects upon a well-defined systematic plan. The essentially psychological character of the preliminary work must now be supplemented by the collaboration of specialists in each subject, in order to ensure the establishment of that aggregate of means necessary and sufficient to incite the child to auto-education. This is the experimental preparatory work, which establishes those means of development, those external <i>impressions</i>, necessary to unfold the inner life, and an <i>exact</i> correspondence to the psychical needs of <i>formation</i> is essential in their construction». [p. 66-67]</p>	<p>p. 66-67</p>	<p>III. My contribution to experimental science</p>

EXTRACT	PAGES	CHAPTER
<p>«On the other hand, the picture of psychological development, which is shown to us in our experiments, even though it be incomplete, demonstrates the subtlety with which it is necessary to present to the child the means of his development and, above all, to respect his liberty; conditions which are essential to ensure that psychical phenomena be revealed and may constitute a true “material for observation”; all this demands a special environment and the preparation of a practical staff, forming a whole infinitely superior in complexity and in organization to the ordinary natural science laboratories. Such a laboratory can only be the most perfect school, organized according to scientific methods, where the teacher is a person answering to the “preparer” graduate». [p. 99]</p>	p. 99	IV. The preparation of the teacher
<p>«It is unquestionable that with this method of education the preparation of the teacher must be made <i>ex novo</i>, and that the personality and social importance of the instructress will be transformed thereby. Even after the first desultory experiments hitherto made, a new type of mistress has been evolved; instead of facility in speech, she has to acquire the power of silence; instead of teaching, she has to observe; instead of the proud dignity of one who claims to be infallible, she assumes the vesture of humility». [p. 100]</p>	p. 100	IV. The preparation of the teacher
<p>«The transformation of schools and teachers must now proceed on the same lines. When in a school everything revolves around a fundamental fact, and this fact is a natural phenomenon, the school will have entered the orbit of science. Then the teacher must assume those “characteristics” which are necessary in the presence of science. Among its devotees we find “characteristics” independent of the content of thought; [...]. If therefore, pedagogy is to take its place among the sciences, it must be characterized by its method; and the teacher must prepare herself, not by means of the content, but by means of the method. In short, she should be distinguished by <i>quality</i> even more than by <i>culture</i>. The fundamental quality is the capacity for “observation”; a quality so important that the positive sciences were also called “sciences of observation”, a term which was changed into “experimental sciences” for those in which observation is combined with experiment. Now it is obvious that the possession of senses and of knowledge is not sufficient to enable a person to observe; it is a habit which must be developed by <i>practice</i>». [p. 102]</p>	p. 102	IV. The preparation of the teacher

EXTRACT	PAGES	CHAPTER
<p>«To observe it is necessary to be “trained” and this is the true way of approach to science. [...] He who has been “trained” to see, begins to feel interest, and such interest is the motive-power which creates the spirit of the scientist. As in the little child internal <i>co-ordination</i> is the point of crystallization round which the entire psychical form will coalesce, so in the teacher interest in the phenomenon observed will be the centre round which her complete new personality will form spontaneously». [p. 102-103]</p>	p. 102-103	IV. The preparation of the teacher
<p>«The quality of observation comprises various minor qualities, such as <i>patience</i>». [p. 103]</p>	p. 103	IV. The preparation of the teacher
<p>«The vision of the teacher should be at once precise like that of the scientist, and spiritual like that of the saint. The preparation for science and the preparation for sanctity should form a new soul, for the attitude of the teacher should be at once positive, scientific and spiritual. Positive and scientific, because she has an <i>exact</i> task to perform, and it is necessary that she should put herself into immediate relation with the truth by means of rigorous observation, that she should strip off all illusions, all the idle creations of the fancy, that she should distinguish truth from falsehood unerringly, that, in fact, she should follow the example of the scientist, who takes account of every minute particle of matter, every elementary and embryonic form of life, but eliminates all optical delusions, all the confusion which impurities and foreign substances might introduce into the search for truth. To achieve such an attitude <i>long practice is necessary, and a wide observation of life</i> under the guidance of the biological sciences. Spiritual, because it is to man that his powers of observation are to be applied, and because the characteristics of the creature who is to be his particular subject of observation are spiritual. I would therefore initiate teachers into the observation of the most simple forms of living things, with all those aids which science gives; I would make them microscopists; I would give them a knowledge of the cultivation of plants and train them to observe their physiology: I would direct their observation to insects, and would make them study the general laws of biology. And I would not have them concerned with theory alone, but would encourage them to work independently in laboratories and in the bosom of free Nature. This complex programme of observation must not exclude the physical aspects of the child. Thus the direct and immediate preparation for a higher task should be the knowledge of the physical needs of the child, from birth to the age when physical life is beginning to develop in his organization and becomes susceptible to treatment». [p. 107-108]</p>	p. 107-108	IV. The preparation of the teacher

EXTRACT	PAGES	CHAPTER
«But all this is but a part of the “preparation”. The teacher must not remain thus on the threshold of life, like those scientists who are destined to observe plants and animals, and who are accordingly satisfied with what morphology and physiology can offer. [...] Her sphere is to be vaster and more splendid; she is about to observe “the inner life of man”. The arid field which is limited to the marvels of organic matter will not suffice for her; all the spiritual fruits of the history of humanity and of religion will be necessary for her nourishment. The lofty manifestations of art, of love, of holiness, are the characteristic manifestations of that life which she is not only about to observe but to serve, and which is her “own life”; not a thing strange to her, and therefore cold and arid; but the intimate life she has in common with all men, the true and only real life of Man». [p. 109]	p. 109	IV. The preparation of the teacher
«The scientific laboratory, the field of Nature where the teacher will be initiated into “the observation of the phenomena of the inner life”, should be the school in which free children develop with the help of material designed to bring about development. When she feels herself aflame with interest, “seeing” the spiritual phenomena of the child, and experiences a serene joy and an insatiable eagerness in observing them, then she will know that she is “initiated”. Then she will begin to become a “teacher”. [p. 109-110]	p. 109-110	IV. The preparation of the teacher

### 5) The Child, Society and the World (1. ed., English, 1989)

From the introduction by the editor, p. 59-60: «Current pedagogic practice, centred on the institutionalized madness of huge comprehensive schools, is dictated by predominantly external, rational, economic and bureaucratic (not to mention ideological) factors; internal pedagogic and anthropological arguments for a new education system to build a new society, go largely unheard. In her lecture, given as long ago as in 1942, Montessori presents an unbiased picture, built up from her own experiences, of a completely different comprehensive school, in which “comprehensive” indicates an anthropological rather than a short-term, school-oriented approach. The decision-making process, the development and promotion of free co-operation, and the child’s attachment to one place in particular, are the key points of the lecture. Also mentioned are the “open-door principle” in a school without year classes, the experience of spontaneous development of a kind of “godparent role”, and of the successful policy of teaching children at different stages of learning».

EXTRACT	PAGES	CHAPTER
<p>«We may use any means we have to attract the children's attention. Their attention is attracted through activity. Give them activity, attract them through sweetness. This also can be a method of love because we know what we are aiming at. We know that this energy exists inside the children and urges them on to do exercises which are necessary for their development. It is nature which brings the children to the point of concentration, not you. You help when you understand the idea and when you give them exercises which bring control. Give them anything which gives them an immediate interest.</p> <p>The teacher must be dignified as well as attractive. The teacher must be superior and not just a friend as she is in the modern schools. The teacher and the children are not at all equals together. There are enough children in the class without the teacher becoming a child with the children. They do not need another child. They need a dignified, mature person. The children must admire the teacher for her importance. If they have no authority, they have no directive. Children need this support. If you caress or kiss them, do so with dignity. The children must not be attached to the teacher but they must have confidence in her. The children must be attached to the material; if they are attached to teacher they cannot be independent. Dignity is not arrogance. To be dignified is just to be a superior person and the adult must be superior to the children because she has lived longer. The children know that in this attractive environment they are free to choose their own occupations and that there is this attractive dignified person. An English poet wrote of a teacher that she should be like an angel, protective and sweet and dignified. The children get this sense of security when they are near this superior person. The teacher must be everything that is perfect». [p. 17-18]</p>	<p>p. 17-18</p>	<p>II. To teachers (Concentration and the teacher. Course lecture, London 1946)</p>
<p>«It is this interest which the teacher must be able to inspire in the child, and then know how to educate it. This forms the psychological part of our study. If the child were not to possess intelligence, nor this vital force of interest, then you would certainly not be able to do anything with him. But I repeat that there is the natural interest in him, and therefore, you have in your hands the two forces, interest and didactic material». [p. 61]</p>	<p>p. 61</p>	<p>IV. Montessori's "Alternative Comprehensive School": on the Principles of the Montessori School (On the Principles of the Montessori School. Course lecture, India 1942)</p>

EXTRACT	PAGES	CHAPTER
«We do not conceive of putting children of the same age all classed together. The logic of this is seen in nature; a family of three children, born at different times, naturally gives the difference in age». [p. 65]	p. 65	IV. Montessori's "Alternative Comprehensive School": on the Principles of the Montessori School (On the Principles of the Montessori School. Course lecture, India 1942)
«Wherever our method has been developed, there was always a relation between the pre-elementary, and the elementary education. One of the secrets is the open doors. In our schools there is no such thing as a closed door which stands like a policeman barring the way. The open door to the other rooms gives a freedom of circulation, between the different grades, and this circulation is of the utmost importance for the development of culture. One of the great advantages of our method is this living together of the three ages and it is one of the best ways for individual development. This would bring terrible disorder in ordinary schools and it would be impossible for the curriculum to proceed. Because how could there be any order? It is evident that here it is not the teacher who keeps the order, but that it is a psychological organization of the children which brings them to these results». [p. 65-66]	p. 65-66	IV. Montessori's "Alternative Comprehensive School": on the Principles of the Montessori School (On the Principles of the Montessori School. Course lecture, India 1942)
«That is why it is said that one must be as a child to understand a child. It is a great help for the teacher to have these different ages in the school; and you must understand that to have success you must have these different ages». [p. 69]	p. 69	IV. Montessori's "Alternative Comprehensive School": on the Principles of the Montessori School (On the Principles of the Montessori School. Course lecture, India 1942)
«The relationship between the family, the teacher and the children must be harmonious because the school environment plays a larger part than it did before. Both the teacher and the parents must have the help of psychological knowledge that was not known before... Goodwill alone is not enough. Today we need a positive contribution towards the betterment of the human soul. There must be a mental and moral hygiene towards which family, school and city all make a contribution. This will be the progress of civilization». [p. 74-75]	p. 74-75	V. Child and Society (Children, Teachers and Society. Course lecture, London 1946)

6) The Discovery of the Child (1. ed., English, 1948)

EXTRACT	PAGES	CHAPTER
<p>«The work of education is divided between the teacher and the environment. For the “teaching” teacher there has been substituted with a much more complex combination consisting of a teacher and many different objects, and both the teacher and the objects cooperate in a child’s education. The profound difference that exists between our method and the so-called “objective lessons” of the older systems is that the objects are not a help for the teacher. The objects in our system are, instead, a help to the child himself. He chooses what he wants for his own use, and works with it according to his own needs, tendencies, and special interests. In this way the objects become a means of growth». [p. 150]</p>	p. 150	10. The teacher
<p>«In our schools a teacher does no more than facilitate and explain to a child the very active and prolonged work laid out for him in choosing objects and employing himself with them. It is somewhat akin to what takes place in a gymnasium where both teacher and apparatus are necessary. An instructor shows his students how to use parallel bars and swings, how to lift weights, and so forth. But it is the students themselves who use these objects and by so doing increase their strength, agility, and everything else that can be developed when muscles are exercised with the various objects available in a gym. A gym teacher is not a lecturer but a guide. And just as he would never succeed in strengthening a single one of his students through his talks on the theory of gymnastics, so the older types of school have failed miserably in strengthening a child’s character and personality. Our schools, on the contrary, where the teacher restricts herself to giving guidance to children, have furnished them with a gymnasium for mental exercises. They grow stronger, develop a distinctive personality, are well-disciplined, and acquire an inward health that is the direct and brilliant product of the freeing of the mind». [p. 151]</p>	p. 151	10. The teacher
<p>«The work of the new teacher is that of a guide. She guides the child in his use of the material, in finding the exact word, in facilitating and clarifying all his labours, in preventing him from wasting his energies, and in rooting out chance disturbances. She thus gives the necessary help for swift and sure progress in intellectual growth. As a sure guide on the path of life, she neither urges the child onward nor holds him back, being satisfied that she has fulfilled her task when she has guaranteed this precious traveller, the child, that he is on the right road». [p. 161]</p>	p. 161	11. The technique of the lessons

EXTRACT	PAGES	CHAPTER
«The presence of what is superfluous and the lack of what is necessary are the two chief errors of a teacher. Her perfection is reached when she can take the middle course between these two extremes». [p. 162]	p. 162	11. The technique of the lessons
«We are the guides for these travellers making their entrance into the intellectual world, and we help them to avoid wasting time and strength on useless matters». [p. 166]	p. 166	12. Observations on prejudices

### 3. Iconographic sources. The Montessori model in the elementary class

This chapter is organized around a selection of iconographic sources referring to Montessori learning environments for the elementary school. The visual impact, description and analysis of this kind of documentation help us to identify the specific features that characterize the Montessori learning environment, the actions taking place in it, the subjects acting there, the relationships between the subjects (child to child, adult to child), and the verbal and non-verbal behaviours implemented. Eleven images were considered to be significant to the discussion on the topic under investigation and they are put in chronological order (1926, 1934, 1935, 1950-52, 1951, 1952, 1952, 1956, 1957, 1952-1957, 1999). For some images, we are not able to establish the exact date, so you are provided with an approximate chronological reference. To each of the images showed in this section we have combined one of the texts cited in the previous chapter, adequately chosen in order to link theory to practice, that is to obtain the Montessori model displayed in action.

The only exception is the first picture, dated 1926, which is inserted at the beginning just to testify how the early path of this education model begins in the small child with the sensory-motor activities (unconscious) and then continue expanding as the child grows, advancing on the path using carefully graded materials, and his reason acquires growing power. The Children's House prepares paths of different abilities that will later, harmoniously, result in the fields of culture, a priority interest of childhood plan.

The work of the teacher in this age group may seem more proactive but, as in the previous stage, he must leave wide space to the personal rhythms of the child so

that he will lead, according to the most autonomous forms, his/her active commitment. If the teacher is neither directive nor intrusive, it is the child who makes the connections that are the basis of a true culture: he/she will report the large numbers to the history of the Earth or to the dimensions of the Universe; the observations of plants and animals to the laws of the biosphere; the history of humanity to the awareness of self and of the human group to which the child belongs. In order to meet the needs of the child of 3-6 years, it is fundamental for the teacher to prepare “practical life” or sensorial material, as the teacher offers the elementary child personal exploration and the work of imagination. Together with the well-established motor and verbal skills, the ability to investigate grows over the 6 to 12 period. The teacher therefore prepares the environment on another level: findings, experiments, documentation, outdoor activities. Also, the teacher should prepare many books different from each other: a variety of well-made texts, encyclopaedias and monographs full of meaningful images that give unequivocal answers to the many “why” questions asked by the child of this age. The teacher in the organized learning environment, enters into a relationship with the child considering his/her development and behavior, and allowing him to concentrate as he wants and how much he can on what fascinates him/her, stopping for a long time if he finds it necessary. Two other elements that decisively qualify the Montessori elementary school are: the mixed age classes and the constant suspension of judgment by the adult. The selection of images that we propose help us to demonstrate this.

In short, the main objective of the Montessori teacher is to enable the work of the child through:

1) Freedom:

- free choice of work,
- of the partner,
- of the time for uninterrupted work.

2) Prepared environment:

- original Montessori materials on open shelves,
- time frame: 3 clock hours of uninterrupted free work,
- size of furniture adapted to the size of the child, or providing a step stool,
- enrollment: 3-6 years, 6-12 years (6-9; 9-12), 12-15 (-18) years,
- number of children in a class: the best is 40 children in one class, under 25 there will be problems,
- no curriculum for the child (but for the teacher).

3) Work in class:

- relaxed beginning (no punctuality stress),
- each child chooses his/her own work, each child (each group) works on something else,

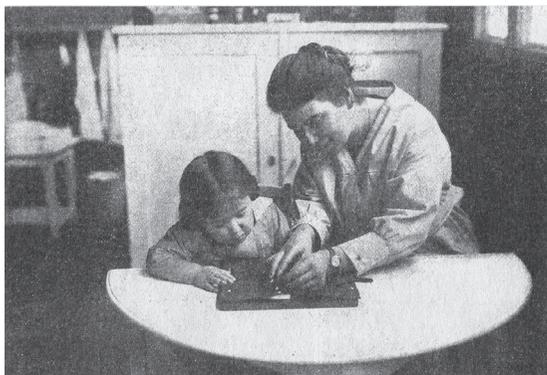
- the teacher presents the materials to 1-5 children (no whole-class teaching),
- about ten presentations a day,
- presentations are chosen according to the child's interest,
- while a few children receive a presentation, the others work independently and peacefully,
- once in a while there is a class meeting: discussing projects, news, class problems, etc.,
- independence: children take responsibility for cleaning, order,
- each material is represented only once,
- only original materials, that are carefully developed,
- no "toys",
- moveable tables and chairs, plenty of free floor space,
- different activities at the same table.

#### 4) Discipline:

- the children walk and talk as is necessary for their work,
- limits of behaviour: the needs of the others,
- self-discipline must be built (no laissez-faire-style),
- children unable to discipline themselves have less freedom,
- no vague commands to work, but raising interest.

All this applies to Children's Houses and the elementary school. For children aged 6 to 12, the following also applies:

- task: exploring the inner workings of things (why is it so),
- raising interest in the whole of cosmos: "cosmic education",
- how? With help of the reasoning mind and the imagination: using charts, time lines, stories, experiments,
- the absorbent mind disappears, now the reasoning mind is at work: mathematics, grammar, laws of nature,
- development of social awareness: opportunity for group work, tables for 4-6 children, space for great work on the floor,
- range of life: family, school, town (all you can reach on a bike),
- two-fold environment: school and "going out",
- external order is no more interesting, but mental order is,
- growing independence, no assistance.



Phot. 1.

Around 1926: in the Children's House «the teacher teaches everything: also to insert a button, and everything appears solemn and interesting to the child».

[Source: Montessori M., *Il metodo della pedagogia scientifica applicato all'educazione infantile nelle Case dei Bambini*, Roma, Maglione e Strini, 1926]



Ancora a Barcellona: Istituto Comunale Montessori di Corsega 268. Attività di geometria all'inizio delle elementari.

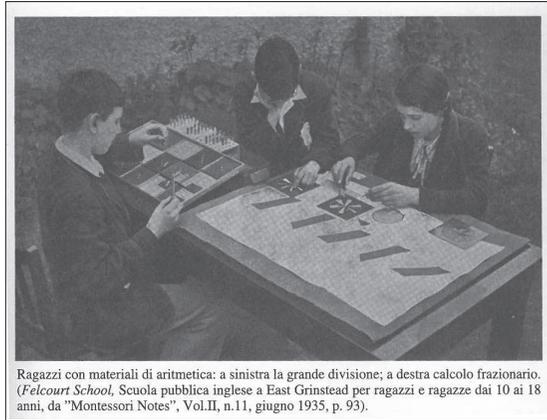
Phot. 2.

Barcelona, around 1934: *Geometry activity at the beginning of elementary school.*

[Source: "Il quaderno Montessori", (2007), n. 93, p. 15].

«The work of education is divided between the teacher and the environment. For the "teaching" teacher there has been substituted with a much more complex combination consisting of teacher and many different objects, and both teacher and objects cooperate in a child's education. The profound difference that exists between our method and the so-called "objective lessons" of the older systems is that the objects are not a help for the teacher. The objects in our system are, instead, a help for the child himself. He chooses what he wants for his own use, and works with it according to his own needs, tendencies, and special interests. In this way the objects become a means of growth». [*The Discovery of the Child*, p. 150].

Phot. 3.  
England, East Grinstead, around  
1935: pupils at Felcourt School  
working with arithmetic materi-  
als. On the left the great division,  
on the right fractional calcula-  
tion. [Source: “Il quaderno Montes-  
sori”, (2006), n. 92, p. 63].



Ragazzi con materiali di aritmetica: a sinistra la grande divisione; a destra calcolo frazionario. (Felcourt School, Scuola pubblica inglese a East Grinstead per ragazzi e ragazze dai 10 ai 18 anni, da "Montessori Notes", Vol.II, n.11, giugno 1935, p. 93).

«Our teaching must only answer the mental needs of the child, never dictate them. Just as a small child cannot be still because he is in need of co-ordinating his movements, so the older child, who may seem troublesome in his curiosity over the what, why and wherefore of everything he sees, is building up his mind by this mental activity, and must be given a wide field of culture on which to feed. The task of teaching becomes easy, since we do not need to choose what we shall teach, but we should place all before him for the satisfaction of his mental appetite. He must have absolute freedom of choice, and then he requires nothing but repeated experiences which will become increasingly marked by interest and serious attention, during his acquisition of some desired knowledge». [*To Educate the Human Potential*, p. 5].

Phot. 4.  
Italy, Perugia, around 1950-  
-1952: a young Sara Con-  
cas, Montessori elementary  
school teacher, and her pupils.  
[Source: “Il quaderno Montes-  
sori”, (2012), n. 113, p. 4-5].



Sara Concas, giovane maestra nella Scuola Elementare Montessori di Perugia, anni Cinquanta.

«It is, however, precisely up to the adult to assist the child's development by creating an environment adapted to his/her new needs. Just as it is necessary to help the baby while he/she is taking his/her first steps, so is it also necessary to help the child while they are taking their first steps in the world of abstraction. Education ought to be a guide in this more critical period of life and of school. The teacher must again be made aware of his limitations, as we have already established with regard to the teacher of the smaller child. For the small child, he had to "count his words". Here, he must be sure of what he ought to do, of what he ought to say, and of the extent to which he must reply to questions. He must be clearly conscious that his duty is to say little; to say only what is true, but not the whole truth in all its details. He must now also say what is "necessary and sufficient". It is indispensable for the child to feel the security the adult can and must give». [*From Childhood to Adolescence*, p. 11]



Phot. 5.

Germany, Berlin-Tegel, around 1951: «Geography lesson in the fourth year at primary school. Children of this age can be more easily taught through words, they are able to listen, ask questions and take part in a discussion. The teacher's (Irene Dietrich) lessons provide them with stimulus and guidance for their own studies. The teacher takes care not to miss the moment when she has to end her lesson. Once the children's interest has been aroused and they have received guidance, it is important not to inhibit their activity, because what they really want is to investigate and learn for themselves». [Source: Müller T. and Schneider R. (edited by), *Montessori = Teaching Materials 1913-1935: Furniture and Architecture: Lehrmaterialien 1913-1935: Möbel und Architektur*, München [etc.], Prestel, 2002, p. 122].

Phot. 6.  
Germany, Essen-Kupferdreh,  
around 1952: at Urban  
Montessori School, pupils of  
the sixth grade calculate areas  
using the Montessori material.  
[Source: Helming H., *Montes-  
sori Pädagogik. Ein moderner  
Bildungsweg in konkreter  
Darstellung. Mit 44 Abbil-  
dungen*, Freiburg im Breisgau  
[etc.], Herder, 1958].



«It is this interest which the teacher must be able to inspire in the child, and then know how to educate it. This forms the psychological part of our study. If the child were not to possess intelligence, nor this vital force of interest, then you would certainly not be able to do anything with him. But I repeat that there is the natural interest in him, and therefore, you have in your hands the two forces, interest and didactic material». [*The Child, Society and the World*, p. 61].

Phot. 7.  
Germany, Berlin-Tegel, 1952:  
«the teacher Irene Dietrich  
is showing a pupil how to  
calculate fractions using the  
segments of a circle». [Source:  
Müller T. and Schneider R. (ed-  
ited by), *Montessori = Teaching  
materials 1913-1935: Furniture  
and Architecture: Lehrmateri-  
alien 1913-1935: Möbel und  
Architektur*, Munchen [etc.],  
Prestel, 2002, p. 118].



«The work of the new teacher is that of a guide. She guides the child in the use of the material, in finding the exact word, in facilitating and clarifying all his labours, in preventing him from wasting his energies, and in rooting out chance disturbances. She thus gives the necessary help for swift and sure progress in intellectual growth. As a sure guide on the path of life, she neither urges the child onward nor holds him back, being satisfied that she has fulfilled her task when she has guaranteed this precious traveller, the child, that he is on the right road». [*The Discovery of the Child*, p. 161].



23 Eine Schülerin hat einen zusammengesetzten Satz analysiert und erklärt den anderen Kindern den Vorgang (vgl. Abb. 44).

Phot. 8.  
Germany, Frankfurt/M.,  
around 1956: at Montessori  
School in Trutz, the Anna  
Schmidt School, a student has  
analyzed a composite sentence  
and describes the process to  
other children. [Source: Hel-  
ming H., *Montessori Pädagogik.  
Ein moderner Bildungsweg in  
konkreter Darstellung*. Mit 44  
Abbildungen, Freiburg im Bre-  
isgau [etc.], Herder, 1958].



Phot. 9.  
Germany, Berlin-Tegel, around  
1957: «Irene Dietrich with one  
of her pupils». [Source: Müller  
T. and Schneider R. (edited  
by), *Montessori = Teaching  
Materials 1913-1935: Furniture  
and Architecture: Lehrmaterialien  
1913-1935: Möbel und  
Architektur*, Munchen [etc.],  
Prestel, 2002, p. 37].

«The child will have the greater pleasure in all subjects, and find them easier to learn, if he be led to realize how these subjects first came to be studied and who studied them. We write and read, and the child can be taught who invented writing and the instruments wherewith we write, how printing came and books became so numerous. Every achievement has come by the sacrifice of someone now dead. Every map speaks eloquently of the work of explorers and pioneers, who underwent hardships and trials to find new places, rivers and lakes, and to make the world greater and richer for our dwelling». [*To Educate the Human Potential*, p. 17-18].

Phot. 10.  
Germany, Berlin-Tegel, around  
1952-1957: Geography lesson.  
[Source: Müller T. and Schne-  
ider R. (edited by), *Montessori =  
Teaching Materials 1913-1935:  
Furniture and Architecture: Lehr-  
materialien 1913-1935: Möbel  
und Architektur*, Munchen [etc.],  
Prestel, 2002, p. 125].



«The secret of success is found to lie in the right use of imagination in awakening interest, and the stimulation of seeds of interest already sown by attractive literary and pictorial material, but all correlated to a central idea, of greatly ennobling inspiration – the Cosmic Plan in which all, consciously or unconsciously, serve the great Purpose of Life». [*To Educate the Human Potential*, p. 1].



Phot. 11.

Italy, Zuel (Cortina d'Ampezzo), around 1999: pupils are working in small group with the teacher Mrs. Paola. [Source: "Il quaderno Montessori, (2002), n. 75, p. 38].

«In our schools a teacher does no more than facilitate and explain to a child the very active and prolonged work laid out for him in choosing objects and employing himself with them. It is somewhat akin to what takes place in a gymnasium where both teacher and apparatus are necessary. An instructor shows his students how to use parallel bars and swings, how to lift weights, and so forth. But it is the students themselves who use these objects and by so doing increase their strength, agility, and everything else that can be developed when muscles are exercised with the various objects available in a gym. A gym teacher is not a lecturer but a guide. And just as he would never succeed in strengthening a single one of his students through his talks on the theory of gymnastics, so the older types of school have failed miserably in strengthening a child's character and personality. Our schools, on the contrary, where the teacher restricts herself to giving guidance to children, have furnished them with a gymnasium for mental exercises. They grow stronger, develop a distinctive personality, are well-disciplined, and acquire an inward health that is the direct and brilliant product of the freeing of the mind». [*The Discovery of the Child*, p. 151].

It is very interesting to observe that if we try a diachronic analysis and comparison of the selected pictures, despite a range of more than sixty years from the first elementary environment (Barcelona, 1934) and the last one in the chronological order (Zuel, 1999), we discover that essential elements which characterize the Montessori model of education (learners, teacher, materials, organization of the learning activities, organization of the prepared learning environment, arrangement of furnishings, working methods, verbal and non-verbal behavior of the teacher) remain coherent and are repeated through the different ages, as cornerstones of quality of the Montessori model at the elementary school level.

#### 4. Empirical sources. A survey on the opinions of Montessori experienced teachers about the characteristic traits of “a good Montessori teacher”

According to an empirical research carried out by the Author in Italy several years ago, consisting of the fulfilment of eight case studies involving schools that declared to apply the Montessori educational model, a research tool called the “Teacher card” was distributed. Its aim was collecting data regarding some characteristics of the teaching staff belonging to the schools involved in the research project. In order to investigate which qualities, both professional and personal, were considered peculiar to “a good Montessori teacher”, the respondents were asked to indicate three adjectives that, in their opinion, were to characterize his/her professional profile. Out of a total of 129 cards returned (57 from preschool teachers, 72 from elementary school teachers), 382 adjectives were collected. As a preliminary step, it was necessary to proceed with an operation of “normalization” of the terms acquired so as to standardize as far as possible the final list of adjectives.

After the standardization of the terms, a final list of adjectives was obtained (Table 1). For each adjective, the frequency with which it was mentioned is indicated.

Table 1 – *Final list of the “normalized” adjectives in order of frequency.*

Item (Italian)	Item (English)	Frequency	Item (Italian)	Item (English)	Frequency	Item (Italian)	Item (English)	Frequency
paziente	patient	59	entusiasta	enthusiast	4	affettuoso	loving	1
osservatore	observer	58	ordinato	ordered	4	allegro	cheerful	1
attento	careful	27	aggiornato	updated	3	altruista	unselfish	1
umile	humble	26	collaborativo	collaborative	3	artigiano	craftsman	1
disponibile	available	19	democratico	democratic	3	autocontrollato	self-controlled	1
preparato	prepared	19	intuitivo	intuitive	3	autonomo	independent	1

Item (Italian)	Item (English)	Frequency	Item (Italian)	Item (English)	Frequency	Item (Italian)	Item (English)	Frequency
rispettoso	respectful	13	ottimista	optimistic	3	capace di autocritica	capable of self-criticism	1
preciso	accurate	11	professionale	professional	3	carismatico	charismatic	1
competente	competent	10	promotore dell'autonomia	promoter of autonomy	3	comunicativo	communicative	1
discreto	discreet	7	ricercatore	researcher	3	consapevole	aware	1
fiducioso	confident	7	tenace	tenacious	3	illuminato	inspired	1
organizzatore	manager	7	versatile	versatile	3	impegnato	committed	1
accogliente	cosy	6	coerente	coherent	2	incoraggiante	encouraging	1
calmo	calm	6	coinvolgente	engaging	2	indagatore	investigator	1
creativo	creative	6	fermo	firm	2	innovativo	innovative	1
amorevole	loving	5	intelligente	intelligent	2	metodico	methodical	1
appassionato	enthusiast	5	mediatore	mediator	2	propositivo	propositive	1
autorevole	authoritative	5	motivato	motivated	2	rigoroso	strict	1
equilibrato	balanced	5	operoso	hard-working	2	semplice	simple	1
curioso	curious	4	stimolante	challenging	2			
empatico	empathic	4						

We are immediately able to note that the first nine adjectives are closely related to the role and the profile of the Montessori teacher in connection with the relationship

set up with the learning environment and with the children who live and work in it.

The first two adjectives that appear to have the highest frequencies are “patient” and “observer”, two intrinsic qualities to the figure of the Montessori teacher as described by Montessori herself.<sup>15</sup> With half of the frequencies the adjectives “careful” and “humble” follow. They indicate two other important qualities in apparent contrast between them: the child is free to move in the environment and to choose the activity that best matches his/her needs. At that moment the “humble” teacher pulls himself aside so as not to be an obstacle to the child’s self-employment. At the same time, the teacher remains vigilant – he is “careful” to grasp even the smallest manifestations of the individual child in the interaction with the learning environment and with the development materials specially organized for him/her. Other adjectives with significant frequencies that qualify a good Montessori teacher are, in the opinion of the respondents: “available”, “prepared”, “respectful”, “accurate” and “competent”. We note that these adjectives are suitable to qualify in a positive way any teacher, not only teachers who work in the Montessori context (Children’s House or elementary classes).

## 5. The role of the Montessori adult.

### Triangulation and final considerations

An attempt of triangulation of the information derived from the sources used up to now in order to represent the profile and role of the Montessori elementary teacher, leads us to discover and appreciate a complex and highly interesting professional profile whose essential features we will try to summarize here.

The good teacher is first and foremost the one who learns to carry out self-observation, self-analysis and continuous professional reflection as a result of which he is able to exercise control over those manifestations that prevent an effective educational interaction with the child. Dr. Montessori is not considering teaching as an absence of intervention, according to a merely “negative” meaning, stating, on the contrary, that the teacher plays a major role in the learning environment. Because of this, we may point out that among the educationists in the history of the twentieth century, the idea of Montessori stands out among others for the attention with which she defines operationally the role that the teacher’s intervention must represent in the teaching-learning process. Her position is particularly emphasized by the fact that she designed that in a very analytical way, achieving a real operationalization of the teacher behavior and his/her didactic functions within the learning environment.

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<sup>15</sup> M. Montessori, *The Discovery of the Child*, Amsterdam 2007, pp. 161-164; M. Montessori, *The Advanced Montessori Method I*, Amsterdam 2007, pp. 98-110.

From a more properly operative point of view, Montessori's approach translates the didactic intervention into what has been called the historical pedagogical stream of "activism": the subject who teaches is also responsible of the organization of the students' environment, enriching it with operative means, tools, activities and experiments, leaving to the subjects the possibility to learn through independent action and research. The adult's task is that of facilitator of the learning process and of mediator of the interaction between the environment and the learner. Then, the position expressed by Montessori appears completely original for the mentioned aspects, namely the rigorous determination of teaching operations that can be translated into the adult's behavior and clearly found in the teaching procedures used in the few, but significant, moments in which the Montessori teacher gives lectures. As for the lesson technique, which we will not discuss here, we should recall in brief the "three-period lesson" whose procedure leads to very interesting considerations either in relation to the objectives that it allows to achieve, either from the point of view of teaching effectiveness. Among other things, we observe that its structure allows the child to realize a real verbal enrichment in retrospect, passing from the representation of the object to its denomination; a very effective way of learning language in the early acquisition steps or in the recovery process of verbal deficits.

In a nutshell, the Montessori elementary teacher, is applying a holistic education approach:

- 1) the teacher develops a scientifically organized intervention in the learning environment;
- 2) operates through the individualization of the intervention;
- 3) carries out intervention characterized by "non-directivity";
- 4) acts as a guide;
- 5) provides orientation;
- 6) is committed to plan lessons and learning activities to engage children;
- 7) makes presentations of the materials;
- 8) acts as a cultural mediator within the prepared learning environment;
- 9) is committed to material-making and curriculum development;
- 10) continuously exercises to make observations aimed at an effective record-keeping.

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