Maria Montessori

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<th>Born</th>
<th>August 31, 1870 Chiaravalle (Ancona), Italy</th>
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<tr>
<td>Died</td>
<td>May 6, 1952 (aged 81) Noordwijk, Netherlands</td>
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<td>Resting place</td>
<td>Noordwijk, Netherlands</td>
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<td>Nationality</td>
<td>Italian</td>
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<td>Education</td>
<td>University of Rome La Sapienza Medical School</td>
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<td>Occupation</td>
<td>Physician and educator</td>
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<td>Known for</td>
<td>Founder of the Montessori method of education</td>
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<tr>
<td>Religion</td>
<td>Catholic</td>
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<td>Children</td>
<td>Mario Montessori Sr.</td>
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Maria Montessori (August 31, 1870 – May 6, 1952) was an Italian physician and educator, a noted humanitarian and devout Catholic best known for the philosophy of education which bears her name. Her educational method is in use today in public and private schools throughout the world.

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[edit] Life and Career

[edit] Birth and Family

Maria Tecla Artemesia Montessori was born on August 31, 1870 in Chiaravalle, Italy. Her father, Alessandro Montessori, 33 years old at the time, was an official of the Ministry of Finance working in the local, state-run tobacco factory. Her mother, Renilde Stoppani, 25 years old, was well educated for the times and was probably related to Italian geologist and paleontologist Antonio Stoppani.[1]

[edit] 1883–1896: Education

[edit] Early education

The Montessori family moved to Florence in 1873 and then to Rome in 1875 because of her father's work. Montessori entered a public elementary school at the age of 6 in 1876. Her early school record was “not
particularly noteworthy”[2], although she was awarded certificates for good behavior in 1st grade and for "lavori donneschi", or “women's work”, the next year.[3]

[edit] Secondary school

In 1883[4] or 1884[5] at the age of 13, Montessori entered a secondary, technical school Regia Scuola Tecnica Michelangelo Buonarroti, where she studied Italian, arithmetic, algebra, geometry, accounting, history, geography, and sciences. She graduated in 1886 with good grades and examination results. That year, at the age of 16, she continued at the technical institute Regio Istituto Tecnico Leonardo Da Vinci, studying Italian, mathematics, history, geography, geometric and ornate drawing, physics, chemistry, botany, zoology, and two foreign languages. She did well in the sciences and especially in mathematics. She initially intended to pursue the study of engineering upon graduation, an unusual aspiration for a woman in her time and place. However, by the time she graduated in 1890 at the age of 20, with a certificate in physics–mathematics, she had decided to study medicine instead, an even more unlikely pursuit given cultural norms at the time.[6]

[edit] University of Rome—Medical school

Montessori moved forward with her intention to study medicine. She appealed to Guido Baccelli, the professor of clinical medicine at the University of Rome but was strongly discouraged. Nonetheless, in 1890, she enrolled in the University of Rome in a degree course in natural sciences, passing examinations in botany, zoology, experimental physics, histology, anatomy, and general and organic chemistry, and earning her diploma di licenza in 1892. This degree, along with additional studies in Italian and Latin, qualified her for entrance into the medical program at the University in 1893.[7] She was met with hostility and harassment from some medical students and professors because of her gender. Because her attendance of classes with men in the presence of a naked body was deemed inappropriate, she was required to perform her dissections of cadavers alone, after hours. She resorted to smoking tobacco to mask the offensive odors.[8] Montessori won an academic prize in her first year, and in 1895 secured a position as a hospital assistant, gaining early clinical experience. In her last two years she studied pediatrics and psychiatry, and worked in the pediatric consulting room and emergency service, becoming an expert in pediatric medicine. Montessori graduated from the University of Rome in 1896 as a doctor of medicine. Her thesis was published in 1897 in the journal Policlinico. She found employment as an assistant at the University hospital and started a private practice.[9][10]


From 1896 to 1901, Montessori worked with and researched so-called "phrenasthenic" children—in modern terms, children experiencing some form of mental retardation, illness, or disability. She also began to travel, study, speak, and publish nationally and internationally, coming to prominence as an advocate for women's rights and education for mentally disabled children.[11]

[edit] Work with mentally disabled children

After graduation from the University of Rome in 1896, Montessori continued with her research at the University's psychiatric clinic, and in 1897 Montessori was accepted as a voluntary assistant there. As part of her work there, she visited asylums in Rome where she observed children with mental disabilities, observations which were fundamental to her future educational work. She also read and studied the works of 19th century physicians and educators Jean Marc Gaspard Itard and Edouard Seguin, who greatly influenced her work. Also in 1897, Montessori audited the University courses in pedagogy and read “all the major works on educational theory of the past two hundred years.”[12]

[edit] Public advocacy
In 1897 Montessori spoke on societal responsibility for juvenile delinquency at the National Congress of Medicine in Turin. In 1898, she wrote several articles and spoke again at the First Pedagogical Conference of Turin, urging the creation of special classes and institutions for mentally disabled children, as well as teacher training for their instructors. In 1899 Montessori was appointed a councilor to the newly-formed National League for the Protection of Retarded Children, and was invited to lecture on special methods of education for retarded children at the teacher training school of the College of Rome. That year Montessori undertook a two-week national lecture tour to capacity audiences before prominent public figures. She joined the board of the National League and was invited to lecture on hygiene and anthropology at one of the two teacher-training colleges for women in Italy.

[edit] Orthophrenic School

In 1900 the National League opened the Scuola Magistrale Ortofrenica, or Orthophrenic School, a “medico-pedagogical institute” for training teachers in educating mentally disabled children with an attached laboratory classroom. Montessori was appointed co-director. (64 teachers enrolled in the first class, studying psychology, anatomy and physiology of the nervous system, anthropological measurements, causes and characteristics of mental disability, and special methods of instruction. During her two years at the school, Montessori developed methods and materials which she would later adapt to use with typical children.

The school was an immediate success, attracting the attention of government officials from the departments of education and health, civic leaders, and prominent figures in the fields of education, psychiatry, and anthropology from the University of Rome. The children in the model classroom were drawn from ordinary schools but considered "ineducable" due to their deficiencies. Some of these children were later able to pass public examinations given to so-called "normal" children.

[edit] 1901–1906: Further studies

In 1901, Montessori left the Orthophrenic School and her private practice, and in 1902 she enrolled in the philosophy degree course at the University of Rome. (Philosophy at the time included much of what we now consider psychology.) She studied theoretical and moral philosophy, the history of philosophy, and psychology as such, but she did not graduate. She also pursued independent study in anthropology and educational philosophy, conducted observations and experimental research in elementary schools, and revisited the work of Itard and Seguin, translating their books into handwritten Italian. During this time she began to consider adapting her methods of educating mentally disabled children to mainstream education.

Montessori's work developing what she would later call “scientific pedagogy” continued over the next few years. Still in 1902, Montessori presented a report at a second national pedagogical congress in Naples. She published two articles on pedagogy in 1903, and two more the following year. In 1903 and 1904, she conducted anthropological research with Italian schoolchildren, and in 1904 she was qualified as a free lecturer in anthropology for the University of Rome. She was appointed to lecture in the Pedagogic School at the University and continued in the position until 1908. Her lectures were printed as a book titled Pedagogical Anthropology in 1910.

[edit] 1906–1911: Casa dei Bambini and the spread of Montessori's ideas

[edit] The first Casa

In 1906 Montessori was invited to oversee the care and education of a group of children of working parents in a new apartment building for low-income families in the San Lorenzo district in Rome. Montessori was interested in applying her work and methods to mentally normal children, and she accepted. The name Casa dei
Bambini, or Children's House, was suggested to Montessori, and the first Casa opened on January 6, 1907, enrolling 50 or 60 children between the ages of two or three and six or seven.[23]

At first, the classroom was equipped with a teacher's table and blackboard, a stove, small chairs, armchairs, and group tables for the children, and a locked cabinet for the materials that Montessori had developed at the Orthophrenic School. Activities for the children included personal care such as dressing and undressing, care of the environment such as dusting and sweeping, and caring for the garden. The children were also shown the use of the materials Montessori had developed. Montessori herself, occupied with teaching, research, and other professional activities, oversaw and observed the classroom work, but did not teach the children directly. Day-to-day teaching and care were provided, under Montessori's guidance, by the building porter's daughter.[25]

In this first classroom, Montessori observed behaviors in these young children which formed the foundation of her educational method. She noted episodes of deep attention and concentration, multiple repetitions of activity, and a sensitivity to order in the environment. Given free choice of activity, the children showed more interest in practical activities and Montessori's materials than in toys provided for them, and were surprisingly unmotivated by sweets and other rewards. Over time, she saw a spontaneous self-discipline emerge.[26]

Based on her observations, Montessori implemented a number of practices that became hallmarks of her educational philosophy and method. She replaced the heavy furniture with child-sized tables and chairs light enough for the children to move, and placed child-sized materials on low, accessible shelves. She expanded the range of practical activities such as sweeping and personal care to include a wide variety of exercises for care of the environment and the self, including flower arranging, hand washing, gymnastics, care of pets, and cooking. She continued to adapt and refine the materials she had developed earlier, altering or removing exercises which were chosen less frequently by the children. Also based on her observations, Montessori experimented with allowing children free choice of the materials, uninterrupted work, and freedom of movement and activity within the limits set by the environment. She began to see independence as the aim of education, and the role of the teacher as an observer and director of children's innate psychological development.[27]

[edit] The spread of Montessori education in Italy

The first Casa dei Bambini was a success, and a second was opened on April 7, 1907. The children in her programs continued to exhibit concentration, attention, and spontaneous self-discipline, and the classrooms began to attract the attention of prominent educators, journalists, and public figures.[28] In the fall of 1907, Montessori began to experiment with teaching materials for writing and reading—letters cut from sandpaper and mounted on boards, moveable cutout letters, and picture cards with labels. Four and five year old children engaged spontaneously with the materials and quickly gained a proficiency in writing and reading far beyond what was expected for their age. This attracted further public attention to Montessori's work.[29] Three more Case dei Bambini opened in 1908, and in 1909 Italian Switzerland began to replace Froebellian methods with Montessori in orphanages and kindergartens.[30]

In 1909, Montessori held the first teacher training course in her new method in Città de Castello, Italy. In the same year, she described her observations and methods in a book titled Il Metodo della Pedagogia Scientifica Applicato All'Educazione Infantile Nelle Casa Dei Bambine (The Method of Scientific Pedagogy Applied to the Education of Children in the Children's Houses).[31] Two more training courses were held in Rome in 1910, and a third in Milan in 1911. Montessori's reputation and work began to spread internationally as well, and around that time she gave up her medical practice to devote more time to her educational work, developing her methods and training teachers.[32] In 1919 she resigned from her position at the University of Rome, as her educational work was increasingly absorbing all her time and interest.

As early as 1909, Montessori's work began to attract the attention of international observers and visitors. Her work was widely published internationally, and spread rapidly. By the end of 1911, Montessori education had been officially adopted in public schools in Italy and Switzerland, and was planned for the United Kingdom. By 1912, Montessori schools had opened in Paris and many other Western European cities, and were planned for Argentina, Australia, China, India, Japan, Korea, Mexico, Switzerland, Syria, the United States, and New Zealand. Public programs in London, Johannesburg, Rome, and Stockholm had adopted the method in their school systems. Montessori societies were founded in the United States (the Montessori American Committee) and the United Kingdom (the Montessori Society for the United Kingdom). In 1913 the first International Training Course was held in Rome, with a second in 1914.

Montessori's work was widely translated and published during this period. *Il Metodo della Pedagogia Scientifica* was published in the United States as *The Montessori Method: Scientific Pedagogy as Applied to Child Education in the Children's Houses*, where it became a best seller. British and Swiss editions followed. A revised Italian edition was published in 1913. Russian and Polish editions came out in 1913 as well, and German, Japanese, and Romanian editions appeared in 1914, followed by Spanish (1915), Dutch (1916), and Danish (1917) editions. *Pedagogical Anthropology* was published in English in 1913. In 1914, Montessori published, in English, *Doctor Montessori's Own Handbook*, a practical guide to the didactic materials she had developed.

**Montessori in the United States**

Main article: Montessori in the United States

In 1911 and 1912, Montessori's work was popular and widely publicized in the United States, especially in a series of articles in *McClure's Magazine*, and the first North American Montessori school was opened in October 1911, in Tarrytown, New York. Scottish-born American inventor Alexander Graham Bell and his wife became proponents of the method and a second school was opened in their Canadian home. The *Montessori Method* sold quickly through six editions. The first International Training Course in Rome in 1913 was sponsored by the American Montessori Committee, and 67 of the 83 students were from the United States. By 1913 there were more than 100 Montessori schools in the country. Montessori traveled to the United States in December 1913 on a three-week lecture tour which included films of her European classrooms, meeting with large, enthusiastic crowds wherever she traveled.

Montessori returned to the United States in 1915, sponsored by the National Education Association, to demonstrate her work at the Panama–Pacific International Exposition in San Francisco, California, and to give a third international training course. A glass-walled classroom was put up at the Exposition, and thousands of observers came to see a class of 21 students. Montessori's father died in November of 1915, and she returned to Italy.

Although Montessori and her educational approach were highly popular in the United States, she was not without opposition and controversy. Influential progressive educator William Heard Kilpatrick, a follower of American philosopher and educational reformer John Dewey, wrote a dismissive and critical book titled *The Montessori Method Examined*, which had a broad impact. The National Kindergarten Association was critical as well. Critics charged that Montessori's method was outdated, overly rigid, overly reliant on sense-training, and left too little scope for imagination, social interaction, and play. In addition, Montessori's insistence on tight control over the elaboration of her method, the training of teachers, the production and use of materials, and the establishment of schools became a source of conflict and controversy. After she left in 1915, the Montessori movement in the United States fragmented, and Montessori education was a negligible factor in education in the United States until 1952.

**1915–1939: Further development of Montessori education**
In 1915, Montessori returned to Europe and took up residence in Barcelona, Spain. Over the next 20 years Montessori traveled and lectured widely in Europe and gave numerous teacher training courses. Montessori education experienced significant growth in Spain, the Netherlands, the United Kingdom, and Italy.

[edit] Spain (1915–1936)

On her return from the United States, Montessori continued her work in Barcelona, where a small program sponsored by the Catalan government begun in 1915 had developed into the Escola Montessori, serving children from three to ten years old, and the Laboratori i Seminari de Pedagogia, a research, training, and teaching institute. A fourth international course was given there in 1916, including materials and methods, developed over the previous five years, for teaching grammar, arithmetic, and geometry to elementary school children from six to twelve years of age. In 1917 Montessori published her elementary work in L'autoeducazionne nelle Scuole Elementari (Self-Education in Elementary School), which appeared in English as The Advanced Montessori Method. Around 1920, the Catalan independence movement began to demand that Montessori take a political stand and make a public statement favoring Catalan independence, and she refused. Official support was withdrawn from her programs. In 1924, a new military dictatorship closed Montessori's model school in Barcelona, and Montessori education declined in Spain, although Barcelona remained Montessori's home for the next twelve years. In 1933, under the Second Spanish Republic, a new training course was sponsored by the government, and government support was re-established. In 1934, she published two books in Spain, Psicogeometrica and Psicoarithmetica. However, with the onset of the Spanish Civil War in 1936, political and social conditions drove Montessori to leave Spain permanently.

[edit] The Netherlands (1917–1936)

In 1917, Montessori lectured in Amsterdam, and the Netherlands Montessori Society was founded. She returned in 1920 to give a series of lectures at the University of Amsterdam. Montessori programs flourished in the Netherlands, and by the mid-1930s there were more than 200 Montessori schools in the country. In 1935 the headquarters of the Association Montessori Internationale, or AMI, moved permanently to Amsterdam.

[edit] The United Kingdom (1919–1936)

Montessori education was met with enthusiasm and controversy in England between 1912 and 1914. In 1919, Montessori came to England for the first time and gave an international training course which was received with high interest. Montessori education continued to spread in the United Kingdom, although the movement experienced some of the struggles over authenticity and fragmentation that took place in the United States. Montessori continued to give training courses in England every other year until the beginning of World War II.

[edit] Italy (1922–1934)

In 1922, Montessori was invited to Italy on behalf of the government to give a course of lectures and later to inspect Italian Montessori schools. Later that year Benito Mussolini's Fascist government came to power in Italy. In December, Montessori came back to Italy to plan a series of annual training courses under government sponsorship, and in 1923, the minister of education Giovanni Gentile expressed his official support for Montessori schools and teacher training. In 1924 Montessori met with Mussolini, who extended his official support for Montessori education as part of the national program. A pre-war group of Montessori supporters, the Societa gli Amici del Metodo Montessori (Society of Friends of the Montessori Method) became the Opera Montessori (Montessori Society) with a government charter, and by 1926 Mussolini was made honorary president of the organization. In 1927 Mussolini established a Montessori teacher training college, and by 1929 the Italian government supported a wide range of Montessori institutions. However, from 1930 on, Montessori and the Italian government came into conflict over financial support and ideological issues.
especially after Montessori's lectures on Peace and Education. In 1932 she and her son Mario were placed under political surveillance. Finally, in 1933, she resigned from the Opera Montessori, and in 1934 she left Italy. The Italian government ended Montessori activities in the country in 1936.

**[edit] Other countries**

Montessori lectured in Vienna in 1923, and her lectures were published as *Il Bambino in Famiglia*, published in English in 1936 as *The Child in the Family*. Between 1913 and 1936 Montessori schools and societies were also established in France, Germany, Switzerland, Belgium, Russia, Serbia, Canada, India, China, Japan, Indonesia, Australia, and New Zealand.

**[edit] The Association Montessori Internationale**

In 1929, the first International Montessori Congress was held in Elsinore, Denmark, in conjunction with the Fifth Conference of the New Education Fellowship. At this event, Montessori and her son Mario founded the Association Montessori Internationale or AMI “to oversee the activities of schools and societies all over the world and to supervise the training of teachers.” AMI also controlled rights to the publication of Montessori's works and the production of authorized Montessori didactic materials. Early sponsors of the AMI included Sigmund Freud, Jean Piaget, and Rabindranath Tagore.

**[edit] Peace**

In 1932, Montessori spoke on Peace and Education at the Second International Montessori Congress in Nice, France; this lecture was published by the Bureau International d'Education, Geneva, Switzerland. In 1932, Montessori spoke at the International Peace Club in Geneva, Switzerland, on the theme of Peace and Education. Montessori held peace conferences from 1932 to 1939 in Geneva, Brussels, Copenhagen, and Utrecht, which were later published in Italian as *Educazione e Pace*, and in English as *Education and Peace*. In 1949, and again in 1950 and in 1951, Montessori was nominated for the Nobel Peace Prize, receiving a total of six nominations.

**[edit] Laren, the Netherlands (1936–1939)**

In 1936 Montessori and her family left Barcelona for England, and soon moved to Laren, near Amsterdam. Montessori and her son Mario continued to develop new materials here, including the knobless cylinders, the grammar symbols, and botany nomenclature cards. In the context of rising military tensions in Europe, Montessori increasingly turned her attention to the theme of peace. In 1937, the 6th International Montessori Congress was held on the theme of "Education for Peace", and Montessori called for a "science of peace" and spoke about the role of education of the child as a key to the reform of society. In 1938, Montessori was invited to India by the Theosophical Society to give a training course, and in 1939 she left the Netherlands with her son and collaborator Mario.

**[edit] 1939–1946: Montessori in India**

An interest in Montessori had existed in India since 1913, when an Indian student attended the first international course in Rome, and students throughout the 1920s and 1930s had come back to India to start schools and promote Montessori education. The Montessori Society of India was formed in 1926, and *Il Metodo* was translated into Gujarati and Hindi in 1927. By 1929, Indian poet Rabindranath Tagore had founded many "Tagore-Montessori" schools in India, and Indian interest in Montessori education was strongly represented at the International Congress in 1929. Montessori herself had been personally associated with the Theosophical Society since 1907. The Theosophical movement, motivated to educate India's poor, was drawn to Montessori education as one solution.
Internment in India

Montessori gave a training course at the Theosophical Society in Madras in 1939, and had intended to give a tour of lectures at various universities, and then return to Europe. However, when Italy entered World War II on the side of the Germans in 1940, Britain interned all Italians in the United Kingdom and its colonies as enemy aliens. In fact only Mario Montessori was interned, while Montessori herself was confined to the Theosophical Society compound, and Mario was reunited with his mother after two months. The Montessoris remained in Madras and Kodaikanal until 1946, although they were allowed to travel in connection with lectures and courses.

Elementary material, Cosmic Education, and Birth to Three

During her years in India, Montessori and her son Mario continued to develop her educational method. The term "cosmic education" was introduced to describe an approach for children aged from six to twelve years that emphasized the interdependence of all the elements of the natural world. Children worked directly with plants and animals in their natural environments, and the Montessoris developed lessons, illustrations, charts, and models for use with elementary aged children. Material for botany, zoology, and geography was created. Between 1942 and 1944 these elements were incorporated into an advanced course for work with children from six to twelve years old. This work led to two books: Education for a New World and To Educate the Human Potential.

While in India, Montessori observed children and adolescents of all ages, and turned to the study of infancy. In 1944 she gave a series of thirty lectures on the first three years of life, and a government recognized training course in Sri Lanka. These lectures were collected in 1949 in the book What You Should Know About Your Child.

In 1944 the Montessoris were granted some freedom of movement and traveled to Sri Lanka. In 1945 Montessori attended the first All India Montessori Conference in Jaipur, and in 1946, with the war over, she and her family returned to Europe.

1946–1952: The Last Years

In 1946, at the age of 76, Montessori returned to Amsterdam, but she spent the next six years travelling in Europe and India. She gave a training course in London in 1946, and in 1947 opened a training institute there, the Montessori Centre. After a few years this centre became independent of Montessori and continued as the St. Nicholas Training Centre. Also in 1947, she returned to Italy to re-establish the Opera Montessori and gave two more training courses. Later that year she returned to India and gave courses in Adyar and Ahmedabad. These courses led to the book The Absorbent Mind, in which Montessori described the development of the child from birth onwards and presented the concept of the Four Planes of Development. In 1948 Il Metodo was revised again and published in English as The Discovery of the Child. In 1949 she gave a course in Pakistan and the Montessori Pakistan Association was founded.

In 1949 Montessori returned to Europe and attended the 8th International Montessori Congress in Sanremo, Italy, where a model classroom was demonstrated. The same year, the first training course for birth to three years of age, called the Scuola Assistenti all'infanzia (Montessori School for Assistants to Infancy) was established. She was nominated for the Nobel Peace Prize. Montessori was also awarded the French Legion of Honor, Officer of the Dutch Order of Orange Nassau, and was the recipient of an Honorary Doctorate of the University of Amsterdam. In 1950 she visited Scandinavia, represented Italy at the UNESCO conference in Florence, presented at the 29th international training course in Perugia, gave a national course in Rome, published a fifth edition of Il Metodo with the new title La Scoperta del Bambino (The Discovery of the Child), and was again nominated for the Nobel Peace Prize. In 1951 she participated in the 9th International Montessori
Congress in London, gave a training course in Innsbruck, was nominated for the third time for the Nobel Peace Prize. Montessori died of a cerebral hemorrhage in Noordwijk aan Zee, the Netherlands, at the age of 81. [86]

[edit] Educational Philosophy and Pedagogy

Main article: Montessori Education

[edit] Early influences

Montessori's theory and philosophy of education were initially heavily influenced by the work of Jean Marc Gaspard Itard, Édouard Séguin, Friedrich Fröbel, and Johann Heinrich Pestalozzi, all of whom emphasized sensory exploration and manipulatives. [87][88] Montessori's first work with mentally disabled children, at the Orthophrenic School in 1900–1901, used the methods of Itard and Seguin, training children in physical activities such as walking and the use of a spoon, training their senses by exposure to sights, smells, and tactile experiences, and introducing letters in tactile form. [89] These activities developed into the Montessori “Sensorial” materials. [90]

[edit] Scientific pedagogy

Montessori considered her work in the Orthophrenic School and her subsequent psychological studies and research work in elementary schools as “scientific pedagogy,” a concept current in the study of education at the time. She called for not just observation and measurement of students, but for the development of new methods which would transform them. “Scientific education, therefore, was that which, while based on science, modified and improved the individual.” [91] Further, education itself should be transformed by science: “The new methods if they were run on scientific lines, ought to change completely both the school and its methods, ought to give rise to a new form of education.” [92]

[edit] Casa dei Bambini

Working with non-disabled children in the Casa dei Bambini in 1907, Montessori began to develop her own pedagogy. The essential elements of her educational theory emerged from this work, described in The Montessori Method in 1912 and in The Discovery of the Child in 1948. Her method was founded on the observation of children at liberty to act freely in an environment prepared to meet their needs. [93] Montessori came to the conclusion that the children's spontaneous activity in this environment revealed an internal program of development, and that the appropriate role of the educator was to remove obstacles to this natural development and provide opportunities for it to proceed and flourish. [94]

Accordingly, the schoolroom was equipped with child-sized furnishings, "practical life" activities such as sweeping and washing tables, and teaching material that Montessori had developed herself. Children were given freedom to choose and carry out their own activities, at their own paces and following their own inclinations. In these conditions, Montessori made a number of observations which became the foundation of her work. First, she observed great concentration in the children and spontaneous repetition of chosen activities. She also observed a strong tendency in the children to order their own environment, straightening tables and shelves and ordering materials. As children chose some activities over others, Montessori refined the materials she offered to them. Over time, the children began to exhibit what she called "spontaneous discipline". [95]

[edit] Further development

Montessori continued to develop her pedagogy and her model of human development as she expanded her work and extended it to older children. She saw human behavior as guided by universal, innate characteristics in human psychology which her son and collaborator Mario Montessori identified as "human tendencies" in 1957.
In addition, she observed four distinct periods, or "planes", in human development, extending from birth to six years, from six to twelve, from twelve to eighteen, and from eighteen to twenty-four. She saw different characteristics, learning modes, and developmental imperatives active in each of these planes, and called for educational approaches specific to each period. Over the course of her lifetime, Montessori developed pedagogical methods and materials for the first two planes, from birth to age twelve, and wrote and lectured about the third and fourth planes.