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Tonya K. Parks  
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**A Comparison of the Philosophy of Maria Montessori to  
Current Research on the Educational Practices of  
Developmentally Delayed and At Risk Students**

A Research Project submitted in partial fulfillment of the requirements for the degree of

**MASTER OF EDUCATION**

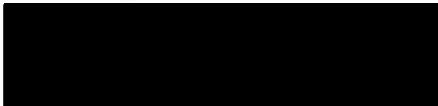
To the faculty of the department of

EDUCATION  
At  
LYNN UNIVERSITY

Boca Raton, Florida  
by  
Tonya K. Parks

Submitted

Date: 1/02



*(Student's Signature)*

Approved

Date: 3/06/02



*(Mentor's Signature)*

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## Chapter 1

### Introduction

The dual focus of this paper requires a single perspective on different aspects of change. Special education has developed rapidly in the United States over the past 20 years, calling for an understanding of social and legislative policies (Standing, 1984). “The Montessori method, on the other hand, aims to respond to changes in the growing young child” (Ibid). This paper examines both, in order to obtain a clearer view of the current and ongoing relationship between the two. Its findings are based on the laws and curriculum of Special Education and Maria Montessori’s method.

Special Education has gone through many changes. “Special” means distinctive or unique, exceptional or unusual (Webster’s New World Dictionary 1996 and Thesaurus 1996). Special education, in common usage, refers to the educational curriculum designed for the student who stands apart or to one side of the average child. Typically, those disabled students who, under The Individual with Disabilities Education Act (IDEA) 1990, have the right to educational services in an environment least restrictive to their needs. The issue of special education’s services to very young children, age birth to five, with developmental disorders, emerged in 1986 when Congress passed PL 99-457. (Kauffman, 1997). In this paper, special education will refer both to current curriculum and to laws that address the needs of children between the ages of three and five years.

“The principles of Maria Montessori’s method are founded directly on the law of life itself. It is no exaggeration to say that this method has the vitality of a living thing; for it is based directly on the observed manifestations of the human child” (Standing, 1957). After graduating from medical school, Maria continued to do

psychiatric work at the university of Rome. One of the responsibilities she was given was to visit the Rome asylums for the insane in order to select suitable subjects for treatment at a local clinic. In the asylums she saw feeble-minded children who were considered to be unable to function in school or in their families. Her passion was “the idiot children”. As she studied Jean-Marc-Gaspard Itard and Edouard Seguin, and their work on human development, Maria started to believe that these special children were indeed trainable. In light of her own observations, Seguin’s work seemed to suggest the answer Montessori was looking for. “I felt that mental deficiency presented chiefly a pedagogical, rather than mainly a medical, problem.”(Kramer, 1976). This was the beginning of Maria’s study in education. Because of this focus, the Montessori method provides room for change, basing its outlook on the nature and the nurture of humanity, including its potential for growth.

Infants, who are at risk of being labeled developmentally delayed, are so based on three categories. First are those who are born with genetic conditions and identified immediately after birth. The second group is caused by biological insults before, during or after birth. The third is a group of children who are at risk due to environmental factors such as living conditions (Hickson, Blackman, Reis, 1995). “Specific dimensions of this third category have been difficult to pin down; poverty has been associated with an increased risk of mental retardation” (Ibid).

Emphasis of a child’s development falls on reducing any delay in the acquisition of important developmental milestones, especially for those children with moderate, severe and profound levels of mental retardation. More seriously impaired children can also profit from early intervention programs, whose more functional objectives concern

the activities of daily living. "For children with mild mental retardation or, more conservatively, at-risk children, the primary concern is to prepare them for successful academic performance" (Haskins, 1989).

Children are not typically labeled mentally retarded until the school- age years. In the educational sector, these children are labeled "developmentally delayed" or "at risk". The largest program servicing these children today is a program called Head Start. Head Start was created as part of the "war on poverty". Its primary goal is to help children from economically challenged families. Its goal is to provide a program that stresses physical, social and intellectual growth of children. This government developed program services 700,000 children across the United States. The curriculum is not the same in every program, but in most cases preparing children for school is stressed (The Gale encyclopedia of Childhood and Adolescence, 2000). "Initially, program development was designed to provide health and nutritional services to poor children. The idea behind the educational philosophy was to develop a child's cognitive skills" (Ibid). Programs developed today are designed to fill in the missing pieces of mental development, instead of developing programs to teach children the steps necessary for them to fill in the steps naturally. Although this program was not designed specifically for children who are labeled developmentally delayed, it does service those at risk due to economic struggles.

"The major goals of childhood programs for less impaired special needs-- children under five years of age are: (1) to minimize and, if possible, reverse the impact of delays or deficits in normal cognitive development on later school performance; and (2) to support family efforts to achieve desired intellectual, vocational, and social outcomes" (Hickson, Blackman, Reis, 1995).

Maladaptive behavior is viewed as inappropriate learned responses; therefore, intervention should consist of rearranging antecedent events and consequences to teach

more adaptive behavior (Kauffman, 1997). This can be achieved through a behavioral model. A behavioral model is designed to outline a desired behavior through specific activities and timelines. The behavioral model places careful control of the outside influences affecting behavior throughout the progress of the maintained or changed behavior. It monitors the repetition of the cause-effect relationship between outside influences and the acquired behavior. This constitutes a natural-science approach. “Interventions based on a behavioral model consist of choosing desired behavior, measuring its current level, analyzing probable controlling environmental events, and changing antecedent or consequent events until acceptable changes are produced in the target behaviors” (Ibid, 1997).

Since such new learning has attracted more than one kind of valid approach, it is my objective to compare and contrast the current methods of Special Education with that of Montessori Education. I shall map the history of Special Education as it pertains to the developmentally delayed and behavioral disordered children between the ages of three and five. I will discuss how history and laws have impacted Special Education today, and review both its strengths and weaknesses. I shall also discuss the history and foundation of Montessori Education, how it is used today, and why it promises benefits if implemented into the Special Education Curriculum. Some of the questions that will be addressed are: Does the Montessori environment provide the least restrictive environment for the developmentally delayed and behaviorally disordered student between ages three and five? What benefits would follow from keeping the current Special Education practices? Should our current Special Education practices to include the Montessori method?



**Definitions of Terms:**

**Special Education:**

The pedagogy of students who have been identified as needing additional services to succeed academically.

**Montessori Method:**

The philosophy of education founded in the observation of the child, based on life experiences.

**Developmentally Delayed:**

Disorders apparently caused by the child's failure to develop at a normal rate or according to the usual sequence.

**Behavioral Disorder:**

Assumptions that emotional or behavioral disorders result primarily from inappropriate learning and that the most effective preventive actions and therapeutic interventions involve controlling the child's environment so as to teach appropriate responses.

## Chapter 2

### The Chronological Order of Laws and the Curriculum of Special Education

The idea of Special Education did not exist in the 1700's. The idea that children were useful in society, if born with abnormalities, was non-existent. During the pre-historic era, infanticide was practiced (Hickson, Blackman, Reis, 1995). Special education, which addresses the needs of all children, did not exist until the middle of the 1950's. Most laws governing special education began with the need to help those who were considered mentally retarded. Today, these students are not labeled until school age years, and from birth to age five, they are considered developmentally delayed or at-risk (Kauffman, 1997).

It was not until the 18<sup>th</sup> century that a distinction between mental retardation and mental illness was even considered. Studies by Benjamin Rush (1745-1813) and Jean Itard (1801) educated the general public to a broader view of mental retardation and mental illness. Benjamin Rush made it known, (to the general public) the inhumane treatment of prisoners with mental differences. However, Rush did not distinguish between mental retardation and mental illness. Jean Itard studied a boy found in the jungle and later published the report the Wild Boy of Aveyron which reflected his findings. The child found in the jungle had no exposure to other human beings until his discovery. Itard tried to socialize and give the boy language skills. Itard had some success, however, for the most part, the boy was considered unfit for public participation (Hickson, Blackman, Reis, 1995). This, along with many other studies during the time,

proved that there was a distinction between mental illness and developmental delays, and that possibly education at some level was necessary for the mentally challenged.

During the first half of the 19<sup>th</sup> century Esquirol (1782-1840) did classify mental retardation, from mental illness. This classification was considered to be two levels of feeble mindedness. The first juvenile delinquent institution was founded in New York, which included housing for the mentally retarded, but did not provide education. The first published description of Down syndrome was produced, giving evidence for support to Esquirol's classification between mental retardation and mental illness. In 1850, a school, in New Haven, Connecticut, was established for students who were considered idiotic and feeble minded. This school not only provided housing but also provided education for truant, disobedient and insubordinate children. This was the first step toward a formal education for the feeble-minded and disobedient. The American Association on Mental Retardation was formed, and the first day school for children with mental retardation was started in the United States (Hickson, Blackman, Reis, 1995).

In the beginning of the 20<sup>th</sup> century education, training efforts in institutions were largely replaced by custodial care. This was a regression in the thought for education for the developmentally delayed. The idea that mental retardation was caused by genetics was replaced by the belief that environment was the causing factor. This belief became known as the eugenics movement (Hickson, Blackman, Reis, 1995). Due to the eugenics movement negative attitudes replaced positive ones toward individuals with mental retardation. The eugenics movement received further support when it was believed that people with sub average intelligence were more fertile (Davies, Ecob, 1964). This delayed the development of special education even further.

In 1911, the Research Committee of the Eugenics Section of the American Breeder's Association considered various possible solutions to mental retardation ranging from laissez-faire to euthanasia. The committee recommended two remedies be applied to reduce the menace of mental deficiency. The committee's primary recommendation was that mentally defective people should be segregated from society. Second, sterilization for those found to be feeble minded were to be implemented. Both remedies were applied widely during the first half of the 20<sup>th</sup> century. Institutions grew rapidly in size and sterilization laws were put into place in many states. These laws, that were found to be constitutional, remain in effect today in some states (Hickson, Blackman, Reis, 1995). The Intelligence test created by Binet and Simon in 1905 was used to classify people with mental retardation. This movement provided further justification for the abandonment of education and training efforts. Because the new test identified the mildly mentally retarded, the number of people labeled mentally retarded grew dramatically. Although the testing proved to help classify people, it also served to increase the negative attitude toward mental retardation in society, again, delaying education for special needs people (Hickson, Blackman, Reis, 1995).

It was not until after the great depression, in the 1930's, that the attitude toward mental retardation began changing. By this time, mental retardation was no longer viewed as a menace to society, because it had become apparent that individuals with mental retardation did not inevitably become criminals, or produce offspring with mental retardation. Even more important, the realization that Intelligence tests were not set in concrete reopened the possibility of effective education and training (Hickson, Blackman, Reis, 1995)

Scheerenberger (1983) has identified at least three different educational philosophies that were represented in the education of children with mental retardation. The most conservative approach emphasized the limitations of individuals with mental retardation and advocated only limited education. The main focus of this approach was individual happiness. A second philosophy, characterized as “progressive, “ emphasized social and emotional growth. This philosophy was geared toward teaching independent living skills (Hickson, Blackman, Reis, 1995). The third educational philosophy was recommended by a gentleman named Wallace, and adopted by Scheerneberer, and is still used today. It consists of separate classes for three categories of children who are classified as mentally retarded: trainable children, children with mild mental retardation unsuitable for return to a regular class, and children with mild mental retardation who might be returned to a regular class (Ibid, 1995). Again, the focus of educating those with disabilities lay with the students who were considered mentally retarded.

Not until the 1950's did students who were considered handicapped become a focus for advocacy groups. This opened the door for all students with special needs. The focus started with the National Association of Parents and Friends of Mentally Retarded Children, but did not end there. During the 1960's and 1970's laws were enacted to protect the rights of these students. The rights of individuals with mental retardation remained a central concern through the decade. The principles established in the civil rights struggle of Black Americans in the 1950s and 1960s were invoked in litigation to assure the rights of individuals with mental retardation. In particular, the landmark case of *Brown v. Board of Education (1954)* set an important precedent. The ruling from this benchmark case influenced the outcome of several cases during the 1970s concerning the

rights of persons with disabilities. In the Brown decision, the principle of equal opportunity for education was established. In the *Mills v. Board of Education (1972)* case in Washington, D.C., it was ruled that no child could be denied a free public education because of mental, behavioral, emotional or physical handicaps. *The Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania (1971)* class action suit resulted in a consent agreement stipulating that all children with mental retardation had a right to a “free program of education and training” regardless of degree of deficit. *Halderman v. Pennhurst* ruled that all institutions that violated the right to habilitation of persons with mental retardation must be expeditiously replaced by community programs (Hickson, Blackman, Reis, 1995).

The principles established in these court cases were reflected in two federal laws, expanding the rights of individuals with disabilities. In 1973, amendments to the Vocational Rehabilitation Act (PL 93-112, Section 504) prohibited discrimination solely by reason of handicap in any program or activity receiving federal financial assistance. In 1975, PL 94-142, known today as IDEA, was passed, granting all children with handicaps the right to a free, appropriate education. The law established several additional rights for handicapped children. These rights include the right to due process, the protection against discriminatory testing, education in the least restrictive environment and an outline of each students education program. This outline became know as an IEP. The IEP serves as a monitoring tool for the student and school (Kauffman, 1997).

The passing of PL 94-142 is the basis for a proposal known today as the Regular Education Initiative (REI). The idea behind REI is that all children are mainstreamed

(Stainback & Stainback, 1984). The term mainstreaming or inclusion refers to educating students with disabilities in a regular education classroom (Heward, 2000). The idea behind REI is mainstreaming students with disabilities in a regular classroom all the time. Therefore, special education classrooms can be done away with (Stainback & Stainback, 1984).

The 1980's brought extensions of PL 94-142 with the passing of PL 99-457. This granted special education services to children between ages birth and 5 years by the school year 1990-1991 (Kauffman, 1997). In the 1990's, IDEA was amended to extend services to students with disabilities to the age of 21.

In 1990, PL 101-476, the Individuals with Disabilities Education Act (IDEA), which renamed the Education of the Handicapped Act, amended and reauthorized its provisions. This law added autism and traumatic brain injury to the disabilities served by special education. In addition, it mandated that a transition component be added to each student's IEP by age 16, emphasized meeting the needs of minorities with disabilities, and extended the availability of assistive technology. The Americans with Disabilities Act, or the ADA (PL 101-336), was also adopted in 1990. This law, which focuses upon adults with disabilities, assures their civil rights in employment, public services, public accommodation, transportation, and telecommunication (Hickson, Blackman, Reis, 1995).

The laws that govern special education have resulted in many different programs and philosophies. Most philosophies are still in existence today. The main points of all of these philosophies are a child's readiness for school (Kauffman, 1997). These

programs are all geared to helping the birth to five-year age group prepare for school (The Gale Encyclopedia of Childhood and Adolescence).

In 1966 a program called Head Start was funded by President Lyndon B. Johnson. This program was started as part of President Johnson's war on poverty under the Economic Opportunity Act. Head Start uncovered many children who tested at the mentally retarded level. Due to the bias of Intelligences Tests, these findings were incorrect. The results were skewed because the children did not have the opportunity to learn what was being tested. These children were labeled "six-hour retarded children". They were called so because they functioned well in their own environment and not in an academic setting (Allen, 1980). Head Start has gone from a budget of \$198 million in 1966 to \$5.2 billion in 1999 (National Center for Policy Analysis, 2000).

In 1968, a review of the program called First Chance Network was completed. This program was designed to be part of the Handicapped Children's Early Education Program, which was the result of PL. 99-475. During its review five main approaches to special education and the curriculum were developed. They were: Amelioration of Deficits Approach, Basics Skills Approach, The Developmental Approach, The Psychological Constructs Approach and The Education Content Approach. A common focus in all curriculum approaches was that they should have a rationale representing a philosophical point of view (Allen, 1980).

The Detroit Preschool was built on the Amelioration of Deficits Approach. This approach focuses on improving the weakness of a specific problem for a child. The Detroit Preschool had three major objectives. The first objective was to identify strengths and weaknesses in each child. The second was to improve the weakness. The last was to



conduct a systematic, frequent assessment of the child improvement. The areas focused on in this school were gross motor functioning, fine motor functioning, visual perception and discrimination, auditory discrimination and language functioning. The main focus of the program is to improve the weakness in these areas (Allen, 1980).

The Schaumburg Early Education Center (SEEC) focuses on primary basic skills and developmental tasks. The curriculum is organized around the individual child and measured through a system called development milestones. These milestones are intellectual development, language development, motor-social development, social-emotional development and self-help skills. The main focus of this approach is to develop a direction for aiding a child's development. Once goals are determined, activities are planned. Ongoing evaluations are conducted, changing the goals as they are accomplished. Each plan is based on the child (Allen, 1980).

The Development Task Approach is best seen in the Chapel Hill Project. Chapel Hill was a training outreach project developed to help students with special needs. The Development Task Approach is also known for its Learning Accomplishment Profile (LAP). The LAP has three sections; an evaluation checklist, a task level profile of skills and a concepts units. The evaluation checklist covers the same focus area as the SEEC. The task level profile measures the different activities in terms of levels of functioning. The Concepts unit is made up of 44 different developmental units arranged from simplest to most complex (Ibid, 1980).

The Psychological Constructs Approach is based on the development of a student's self-concept. The rationale may include improving self-concept, establishing

self-control and self-management, motivation, sex role identification and thinking (Allen, 1980).

The Education Content Approach is based on pre-academic skills that prepare children for school. The focus is on pre-reading, pre-arithmetic, language, early forms of social studies, music, art, dance and nature. The curriculum contains the role of the social worker, language program, speech therapy at home, story telling and finger play, holidays and field trips. It mirrors what the child can expect once he/she reaches kindergarten and first grade. This program is designed for children who have multiple handicaps and are between the ages of 3 and 5 (Ibid, 1980).

Special Education has made boundary-breaking progress since the pre-historic era. Most of the progress has been done through meeting the needs of children with mental retardation. However, in the last three decades, needs for all children, who have development delays, have been addressed. "The aim of every early childhood education curriculum is to help each child grow and develop more completely and more happily. This means that each child must have the opportunity to learn and use a wide range of skills and behaviors" (Allen, 1980). Many programs have been developed based on many different philosophical and legislative regulations. However, the need for continued growth and development in the field of Special Education is becoming more and more urgent due to the growing number of children who are meeting the guidelines for special education services. The following table outlines the laws and events leading up to what is known today as our Special Education system.

Table 1

Overall Movement Toward the Provisions of Educational Services to Children with Disabilities

Time Period	Events
Prehistoric Time	Infants with severe disabilities rarely survived. Infanticide was widely practiced.
Middle Ages through Enlightenment	1493-1541: Paracelsus proposed a definition of mental retardation, which clearly differentiated it from mental illness. 1745-1826: Philippe Pinel "Moral management" of individuals with mental retardation and mental illness. 1745-1813: Benjamin Rush: called attention to the inhumane treatment of prisoners with mental retardation and illness. 1799: Jean Itard published his report of the Wild Boy of Aveyron
1800's	1782-1840: Esquirol designated mental retardation as amentia and mental illness as dementia. Classified mental retardation into two levels, idiots and imbeciles. 1825: House of Refuge, first institution for juvenile delinquents in the U.S, founded in New York; similar institutions founded in Boston (1826) and Philadelphia (1828) 1841: Dorothea Dix begins crusade for better care of the insane. 1828-1896: J. Langson Down proposed his ethnic classification, which included a detailed description of what is now called Down Syndrome. 1847: State Reform School for Boys, the first state institution of juvenile delinquents, established in Westborough, Massachusetts 1850: Massachusetts incorporated school for idiotic and feebleminded youths at urging of Samuel Gridley Howe, and Edward Sequin moves to the United States 1866: Edward Sequin publishes Idiocy and its Treatment by the Physiologic Method. 1870-1852: Maria Montessori proved Sequin predication in her development of her educational method. 1871: Ungraded class for truant, disobedient, and insubordinate children opens in New Haven, Connecticut. 1876: American Association on Mental Retardation was formed. 1894: The first day school for children with mental retardation was started in the United States 1898: New York City Board of Education assures responsibility for two schools for truant children 1899: First U.S. Juvenile court established in Chicago
1900-1929	1901: Galton published "Possible Improvement of the Human Breed". Widespread acceptance greets his position that mental retardation was no longer considered remediable. 1908: Clifford Beers publishes A Mind That Found Itself

	<p>1909: National Committee for Mental Hygiene founded; Ellen Key publishes <i>The Century of the Child</i>; William Healy founds the Juvenile Psychopathic Institute in Chicago</p> <p>1911: Arnold Gesell founded the clinic for Child Development at Yale University</p> <p>1912: Congress creates the U.S. Children's Bureau</p> <p>1919: Ohio passes law for statewide education of the handicapped</p> <p>1922: Council for Exceptional Children founded</p> <p>1924: American Orthopsychiatric Association founded</p> <p>1927: Sterilization laws proliferated in many states.</p>
1930-1950	<p>1931: First psychiatric hospital for children in the U.S. founded in Rhode Island</p> <p>1935: Leo Kanner publishes <i>Child Psychiatry</i>; Loretta Bender and others begin school for psychotic children at Bellevue Psychiatric Hospital in New York City</p> <p>1939: Skeels and Dye reported that orphaned infants classified as mentally retarded and placed under the attentive care of female residents of an institution for individual with mental retardation gained dramatically in I.Q.</p> <p>1943: Leo Kanner describes early infantile autism</p> <p>1944: Bruno Bettelheim opens the Orthogenic School at the University of Chicago</p> <p>1946: New York City Board of Education designated '600' schools for disturbed and maladjusted pupils; Fritz Redl and David Wineman open Pioneer House in Detroit</p> <p>1947: Alfred Strauss and Laura Lehtinen publish <i>Psychopathology and Education of the Brain-Injured Child</i> based on work at Wayne County Training School in Northville, Michigan</p>
1950's	<p>1950: Bruno Bettelheim publishes <i>Love is Not Enough</i></p> <p>1950: First organized convention by parents on Mental Retardation founded the National Association of Parents and Friends of Mentally Retarded Children</p> <p>1952: National Association of Parents and Friends of Mentally Retarded Children changed name to National Association for Retarded Children</p> <p>1953: Carl Fenichel founds the League School, first private day school for the severely emotionally disturbed, in Brooklyn</p> <p>1954: PL 83-531 authorized cooperative research in education; two-thirds of the funds were earmarked for mental retardation</p> <p>1955: Leonard Kornberg publishes <i>A Class for Disturbed Children</i>, first book describing classroom teaching of disturbed children</p> <p>1958: Goldberg commissioned by the National Association for Retarded Children to survey special education for trainable children across the United States; Connor reported that children with IQs above 20 did tend to profit from education; PL 85-926 encouraged the training of teacher of children with mental retardation, and established the Institute of Child Health and Human Development, with mental retardation as an explicit</p>

	priority area.
1960's	<p>1960: Pearl Berkowitz and Ester Rothman publish <i>The Disturbed child</i>, describing permissive, psychoanalytic educational approach</p> <p>1961: William Cruickshank et al. Publish <i>A teaching Method for Brain Injured and Hyperactive Children</i>, reporting results of a structured education program in Montgomery County, Maryland; Nicholas Hobbs and associates begin Project Re-ED in Tennessee and North Carolina</p> <p>1962: Norris Haring and Lakin Phillips publish <i>Educating Emotionally Disturbed Children</i>, reporting results of a structured program in Arlington, Virginia' Eli Bower and Nadine Lambert publish <i>An In-School Process for Screening Emotionally Handicapped Children</i> based on research in California</p> <p>1963: PL 88-164 provides federal money for support of personnel preparation in the area of the emotionally disturbed</p> <p>1964: William Morse, Richard Cutler, and Albert Fink publish <i>Public School Classes for the Emotionally Handicapped: A research Analysis</i>; Council for Children with Behavioral Disorders established as a division of Council for Exceptional Children</p> <p>1965: Nicholas Long, William Morse, and Ruth Newman publish <i>Conflict in the Classroom</i>; Autism Society for America Founded; First Annual Conference on the Education of Emotionally Disturbed Children held at Syracuse University</p> <p>1968: Frank Hewett publishes <i>The Emotionally Disturbed Child in the Classroom</i>, reporting use of an engineered classroom in Santa Monica, California</p>
1970's	<p>1970's: <i>Brown v. Board of Education</i> set an important precedent which influenced the outcomes of several cases during the 1970s concerning the rights of persons with disabilities</p> <p>1970: William Rhodes begins Conceptual Project I Emotional Disturbance, summarizing theory, research, and intervention</p> <p>1971: <i>The Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania</i>, a class action suit, resulted in a consent agreement stipulating that all children with mental retardation had a right to a "free program of education and training" regardless of degree of deficit.</p> <p>1972: PCMR, President Nixon outlined two goals: to reduce by half the occurrence of mental retardation in the United States before the end of this century, and to enable one-third of the more than 200,000 retarded persons in public institutions to return to useful lives in the community.</p> <p>1972: <i>Mills v. Board of Education</i> ruled that no child could be denied a free public education because of mental, behavioral, emotional, or physical handicaps</p> <p>1973: Amendments to the Vocational Rehabilitation Act PL 92-112, Section 504) prohibited discrimination solely by reason of handicap in any program or activity receiving federal financial assistance.</p> <p>1974: Association for Persons with Severe Handicaps founded</p>

	<p>1975: PL 94-142 the Education for All Handicapped Children Act was passes granting all children with handicaps the right to a free, appropriate education, the law established several additional rights; the right to due process, protection against discriminatory testing, education in the least restrictive environment, individualized education programs (IEPs).</p> <p>1975: Nicholas Hobbs publishes Issues in the Classification of Children and The futures of Children, reporting the work of the Project on the Classification of Exceptional Children</p> <p>1978: Halderman v. Pennhurst, ruled that all institutions violated the right to habilitation of persons with mental retardation and must be expeditiously replaced by community programs.</p> <p>1978: PL 94-142 (enacted in 1975) requires free, appropriate education for all handicapped children, including the seriously emotionally disturbed; federal funding for National Needs Analyses studies at University of Missouri</p>
1980's	<p>1986: PL 99-457 enacted, extending provisions of PL 94-142 to all handicapped children 3 to 5 years of age by school year 1990-1991; statistics show that about one percent of students enrolled in public schools are receiving special education services as seriously emotionally disturbed, only about one-half of conservative estimate of prevalence</p> <p>1987: National Mental Health and Special Education Coalition formed; C. Michael Nelson, Robert B. Rutherford, and Bruce I. Wolford publish Special Education in the Criminal Justice System</p> <p>1989: Federation of Families for Children's Mental Health founded; National Juvenile Justice Coalition formed</p>
1990's	<p>1990: Individuals with Disabilities Education Act (IDEA) amends PL 94-142; National Mental Health and Special Education Coalition proposes new definition and terminology</p> <p>1992: National Agenda for Student with Serious Emotional Disturbance proposed</p>
2000's	<p>2000: Rehabilitation Act of 1973, Section 504 defined handicap and included ADD in its definition.</p>

Note: From Rehabilitation Act of 1973 Section 504 online source, "Characteristics of Emotional and Behavioral Disorders of Children and Youth" by James M. Kauffman, and "Mental Retardation Foundations of Educational Programming" by Linda Hickson, Lenoard S. Blakman and Elizabeth M. Reis.

## Chapter 3

### The Montessori Environment

In order to understand the foundation of the Montessori Philosophy, we must look at the woman behind it. Maria Montessori was the first woman to graduate from the College of Rome. There, she studied biology and human medicine. After completing her studies in biological medicine, she went on to study mental health at the same University from which she had graduated, first in her class. Her responsibilities were to visit the Rome asylums for the insane in order to select suitable subjects for treatment at the clinic. In the asylums she saw feebleminded children who were considered to be unable to function in school or in their families. Her passion was “the idiot children” (Kramer, 1976).

In 1934 Montessori fled fascist rule in Italy and went to Spain. Prior to her leaving Italy, her method of teaching had become worldwide. In Spain she continued her work until the Spanish Civil War. At that time she was forced to move to the Netherlands taking her work and philosophy with her. From 1939 to 1947, she lived in India where she founded more schools and training programs. She returned to the Netherlands, however, the worldwide recognition of her philosophy had been lost due to the outbreak of the war (Rotherglen history of Montessori Education, 2001). Although she continued her work in Europe, the Montessori method of teaching and the study of the Philosophy behind it was not promoted again until 1960, when the American Montessori Society was established (American Montessori Society, 2002).

Maria Montessori developed an educational philosophy based on her observations. “I felt the mental deficiency presented chiefly a pedagogical, rather than mainly a medical

problem" (Kramer, 1976). With her background in medicine and psychiatric work, she developed what we know today to be the Montessori Philosophy. This philosophy of education is based strictly on the development of the individual child. It is based on the laws of life itself (Standing, 1984).

The first two steps an intending Montessori teacher must take is to prepare his or her environment for mental growth, and prepare herself with an open mind. The teacher must keep her imagination alive. The Montessori teacher is constantly looking at the potential of the child, not the child's current performance. The teacher must believe that the child will reveal his abilities through his work. The teacher must free him/herself from all preconceived ideas concerning the levels at which the children should be. The variety in the ability of her students must not concern the teacher, because the environment is set up based on the individual child. The teacher must know that childrenll act upon natural instincts and do the activities that attract them. So what must she look out for? That one child or another will begin to concentrate. This is the focus of the teachers concerns (Montessori, 1964).

The teacher becomes the facilitator and keeper of the classroom, not the children. The focus of a Montessori teacher is the environment itself. If the environment is prepared correctly, the children will utilize it and not become involved in useless activities. The attraction of the classroom will capture and polarize the child's will. The teacher must keep an environment that is to be well maintained, bright and cheerful. All the manipulatives are to be kept meticulously in order, beautiful and shining, and in perfect condition. Nothing may be missing, so that to the child it always seems new, complete and ready for use. This means that the teacher, also, must be attractive,



pleasing in appearance, tidy, clean, calm, and dignified. These are ideals that each can realize in his/her own way. Montessori believed that when we present ourselves before children, we must present ourselves well because children imitate those they are around most. The teacher's appearance is the first step to gaining the child's confidence and respect. The teacher should study her own movements, to make them as gentle and graceful as possible. So, appearance is vital (Ibid).

“The teacher's first duty is therefore to watch over the environment, and this takes precedence over all the rest. Its influence is indirect, but unless it is well done there will be no effective and permanent results of any kind, physical, intellectual or spiritual” (Montessori, 1964).

“The twelve points of the Montessori method are as follows:

1. It is based on years of patient observation of child nature by the greatest educational genius since Froebel.
2. It has proved itself of universal application. Within a single generation it has been tried with complete success with children of almost every civilized nation. Race, color, climate, nationality, and social rank, type of civilization – all these make no difference to its successful application.
3. It has revealed the small child as a lover of work, intellectual work, spontaneously chosen and carried out with profound joy.
4. It is based on the child's imperious need to learn by doing. At each stage in the child's mental growth, corresponding occupations are provided by means of which he develops his faculties.
5. While it offers the child a maximum of spontaneity, it nevertheless enables him to reach the same, or even a higher, level of scholastic attainment as under the old systems.
6. Though it does away with the necessity of coercion by means of rewards and punishments, it achieves a higher discipline than formerly. It is an active discipline, which originates within the child and is not imposed from without.
7. It is based on a profound respect for the child's personality and removes from him the preponderating influence of the adult, thus leaving him room to grow in biological independence. Hence the child is allowed a large measure of liberty (not license), which forms the basis of real discipline.
8. It enables the teacher to deal with each child individually in each subject, and thus guide him according to his individual requirements.
9. Each child works at his own pace. Hence the quick child is not held back by the slow, nor is the latter, in trying to keep up with the former,

obliged to flounder along hopelessly out of his depth. Each stone in the metal edifice is “well and truly laid” before the next is added.

10. It does away with the competitive spirit and its train of baneful results. More than this, at every turn it presents endless opportunities among the children for mutual help, which is joyfully given and gratefully received.
11. Since the child works from his own free choice, without competition and coercion, he is freed from danger of over strain, feeling of inferiority, and other experiences, which are apt to be the unconscious cause of profound mental disturbances in later life.
12. Finally, the Montessori method develops the whole personality of the child, not merely his intellectual faculties but also his powers of deliberation, initiative and independent choice, with their emotional complements. By living as a free member of a real social community, the child is trained in those fundamental social qualities, which form the basis of good citizenship.” (Standing, 204-205).

The second phase of the teacher’s work is to guide the child who is bored, in a more productive direction. If, at this stage, there is some child who persistently annoys the others, the most practical thing to do is to interrupt him. It is true that when a child is absorbed in his work, one must refrain from interfering, so as not to interrupt the cycle of activity or prevent the student’s free expansion (Montessori, 1964). Nevertheless, the right technique, now, is just the opposite; it is to break the flow of disturbing activity. The interruption may take the form of any kind of exclamation, or showing a special and affectionate interest with a nurturing approach (Ibid).

Before introducing manipulatives that symbolize reality, one must wait until the child has acquired the power to concentrate on something. When the child begins to show interest in one particular activity the teacher must not interrupt. “But the first step is so fragile, so delicate; that a touch can make it vanish again, like a soap bubble, and with it goes all the beauty of that moment” (Montessori, 1964). Therefore, it is vital that the teacher allow the child to develop this level of concentration without interruption.

Almost 100 years has past since the development of the Montessori Philosophy has been introduced to the education field, and the world read, with astonishment, of the almost incredible doings of those small slum children, in the first Casa Dei Bambini, in Rome. Yet, notwithstanding this considerable passage of time, we find the Montessori principle as powerful today as it ever was. Every year, the Montessori environment continues to make fresh developments and new conquests. Each year in England, Ireland, Italy, Holland, Denmark, Germany, France and India students congregate at various training centers, to take courses varying from six months to three years in the Montessori method (Standing, 1984).

Medieval philosophers were right when they said that education, like medicine, is an art, which necessitates the cooperation with nature. In her later years, Montessori used to describe the function of education as an “aid to life.” It is not difficult to explain why the Montessori Method works, for the Montessori Method is founded on general characteristics of life proper to all organisms; and will last as long as life itself (Standing, 1984).

Although it was Dr. Montessori’s intention that her philosophy and method be applied throughout the entire education of the child, there are few Montessori programs in the United States today beyond the third grade, and the popular concept of the method is in relation to a primary program for children aged 2 to 6. One of the early stigmas that still persist is that the method is tied to the image of a suburban white, middle, and upper class educational system. Actually, these children are no less in need of Montessori’s “normalizing” environment than those from more economically disadvantaged

circumstance. With the Montessori method, however, they have the added advantage of the long-range attitudes taught within the system (Hainstock, 1986).

The Montessori method was conceived as an indirect approach to learning, presenting a comprehensive view of the child. Montessori regarded the classroom as a laboratory for observing children and testing and retesting ideas and aids to a child's growth. She approached education as a scientist and pursued her ideas with an open mind, always with strong respect for the child as an individual. It was a scientifically designed method based on the child at his own natural rate of progress, freeing his potential for self-development with a prepared environment (Hainstock, 1986).

Montessori felt that for each of the four stages of human development (birth to six years, six to twelve years, twelve to eighteen years, and eighteen to twenty-four years) it was necessary to change our basic approach to the child, not just give him harder work (Ibid).

The Montessori curriculum places no restraint on the student's ability and provides manual and physical activity through use of concrete and abstract experiences to help him gain mastery of himself and his environment. The materials and lessons allow the child to explore the world through his various senses. Lessons allow him to gain self-confidence and self-mastery. The environment is set up as a simulation of the world in which the child lives. He gains the confidence necessary by experiencing only temporary failures as he works from the simple to the more complex. What has always been most unique about the Montessori method is the detailed emphasis given to sensorial experiences and, herein, lays the key to its great success in later learning (Hainstock, 1986).

Montessori's foundational belief is to observe and take our leads from the child. The good Montessori teacher is less concerned with academic achievement than with those preliminary steps that lay the foundation for it. Though early reading and writing appeal to many parents, these are actually the natural by-products of the other preliminary activities. Montessori felt that nursery schools should foster self-reliance and independence, and be reality oriented. It is in reviewing Montessori's idea that we can see its place in education for today and the future (Hainstock, 1986).

The first point I wish to emphasize with regard to the Montessori Principles is that they are founded directly on the laws of life itself. "It is no exaggeration to say that this method has the vitality of a living thing; for it is based, directly, on the observed manifestations of a living things – the human child" (Standing, 1962).

Dr. Montessori realized that neither the ordinary nursery school, nor the environment of the home, had been made to suit the needs of the child. Therefore, Montessori created an environment based on the needs of the child's development. Then, while other people talked about the need for a child to be able to freely explore his environment and learn through hands on experience, Montessori provided the environment for the child to do it (Standing, 1962). At the same time, with an unrivaled power of observation, she studied their free behavior in this new environment and discerned its significance. Indeed, one could sum up the Montessori method by saying it is a method based on the principle of freedom in a prepared environment (Ibid)

It is this intimate connection between the principles of the Montessori method and the laws of biology, which led Professor Godefroy, professor of psychology in the University of Amsterdam, to express himself as follows:

“Those who are not favorable to the Montessori method ask, skeptically, what will become of it after a number of years, implying that before long a new system will have taken its place.

“It is not difficult to explain to such that the Montessori method is founded on the general characteristics of life, proper to all organisms, and that it will last as long as life itself lasts. It is not possible to imagine that such a principle, having once been introduced into pedagogy, could ever be abandoned.”

This, also, explains why the Montessori method has had such instant success wherever it has been properly applied, irrespective of climate, race, religion or social distinctions; and why it still continues to make fresh conquests, often in spite of determined oppositions. The Montessori environment is founded in the living child and, therefore, allows room for change and growth depending on the child's needs (Standing, 1962).

## Chapter 4

### Special Education and Montessori Education

Today, there are an increasing number of Montessori programs for children of diverse racial, ethnic, and socio-economic backgrounds, as well as for the disadvantaged and special child (i.e., gifted, retarded, physically handicapped, and emotionally disturbed). The method is well suited to an environment, which focuses on equality for all. The Montessori method stresses individuality among a society with many different learning abilities. The focus is on the individual striving to fill his/her own particular needs (Hainstock, 1986).

Large numbers of children can be taught in the Montessori classroom because most of the children are involved in their own projects. The teacher is free to act as a facilitator of children's spontaneous learning. The Montessori environment differs from the conventional group-oriented and subject-matter-oriented educational system. By using the environment as a system of human development through individualized learning, the teacher can manage a variety of learning situations (Ibid).

The Montessori method was conceived as an indirect approach to learning, presenting a comprehensive view of the child. Montessori regarded the classroom as a laboratory for observing children and testing and retesting ideas and educational manipulatives that cater to children's growth. Montessori approached education as an experiment and pursued her ideas with an open mind. Montessori's focus was respect for the child as an individual. It was a scientifically designed method to develop the whole personality of the child at his own natural rate of progress. She did so through a prepared environment.

With this approach she freed the child's potential and set no limitations or expectations on this potential (Hainstock, 1986).

Without effective educational strategies, a child's classroom progress and growth will only be a dream. Without setting reasonable expectations for educators, a child's failure to improve academically and socially is easily and conveniently blamed on the child's development delay. Providing an explanation for educational discrepancies, within the child, gives the school system license to be without fault (Macht, 1998).

Although overshadowed by the concern for program expansion during the last two decades, curriculum development did receive attention during the first half of the 20<sup>th</sup> century. The focus of the curriculum development was to assist students with mental retardation. For the most part, they were intended to serve as guidelines for teachers in determining what to teach individual children rather than an instructional plan for children with special needs. Mostly educators or psychologists, who were interested in specific content areas or skills, developed these curriculums. The child was not considered as a whole. (Meyen, 1995).

The lack of a pre-fabricated curriculum and manipulative materials designed for students with special needs, forced teachers in the position of developing their own. "Few teachers, however, were adequately prepared to assume this responsibility" (Meyen, 1995). In 1950s, and early 1960s, "curriculum guides" were published. Unfortunately, these guides were used as the curriculum instead of their intended use of a suggestion. (Meyen, 1995).

Although special needs have continued to evolve since the prehistoric age, there is room for continued growth. The most important aspect to remember when looking at the



history of special education is that it is based on learning. Special Education is the pedagogy of teaching children. The ultimate goal of special education is to service the educational needs of children (Meyen, 1995).

Montessori provides a responsive environment to those with special needs as well as all learners. Teachers must be innovative. Teachers must be observers of children who have a wide range of physical, emotional, social and intellectual abilities, including gifted to developmentally delayed. Because of the emphasis on individual needs, the use of hands on materials, the method is responsive to all levels of learning. Strong sensory stimulants are needed to attract the attention of delayed children. The materials are designed so that used in the proper sequence, they lead the child gradually into an understanding of abstract ideas. This sensory-motor approach to learning is especially effective in special education. This provides the student with the opportunity to develop and learn through exploration and repetition, while proceeding at the child's individual pace.

“I once taught in a classroom of ‘normal’ children, which also included three children with varying degrees and types of learning disabilities. I was amazed at how easily these three appeared to become “normalized” when freed from the pressures that they had encountered in non-Montessori classrooms.” (Hainstock, 1986).

The parallels between what current psychologists and educators are finding out about early education and the Montessori Philosophy are vital and undeniable. Their studies also show that children learn best in a structured environment of choice. Some psychologists and educators feel a necessity to develop learning patterns through carefully planned environment (Hainstock, 1986). Psychologists' studies show that children desire to learn and do not need to be motivated by reward or punishment. More

importantly, studies show that pre-school children are indeed ready for cognitive experiences. Educational developers feel that a challenging early environment leads to a higher rate of intellectual development. Educators believe that senses play an important part in intellectual development, and children, do indeed, have sensitive periods (Ibid). "Today's educational climate is more conducive to innovative approaches, and the Montessori method is being incorporated into more school curriculums" (Hainstock, 1986).

Educational administrators have been reluctant to develop Montessori programs because they are required to hire certified teachers, who have completed a traditional four-year educational course. The public school classrooms now using Montessori are those conducted by teachers who have adapted Montessori for their own uses. The materials make a classroom look Montessori, but the teachers do not usually follow the Montessori techniques and philosophy (Hainstock, 1986). Therefore, the beginning steps of the educational process have the potential of being missed. Nonetheless the possibilities for Montessori, in all areas of special education, hold an even greater potential, given more study, research and knowledge of adaptabilities (Ibid).

One of the major reasons for Montessori's success with the children of low economic background may be the lack of assumption of pre-learned skills (Lillard, 1972). Because Montessori began her work with retarded children and then with children from the most deprived of backgrounds, she could not take any previous knowledge for granted. She built into her method the simplest of life's experience; how to wash, dress, move about, and carry things, how to hear, touch, and see. Every skill had to be presented from its most primitive beginnings. Muscles were developed for holding a

pencil before the pencil was given, an object was handled before being named. A system of steps broken down to the very basic was developed in order to encourage the levels of learning from the concrete stages to the abstract stages. For the students who missed the beginning steps, this approach can make a difference between success and failure. Therefore, the beginning of the educational process must start in the earlier years with very infantile steps (Lillard, 1972). “The child with special needs often becomes confused and overly excited when confronted with the varied materials available in the Montessori classroom and naturally, modifications to each situation is needed” (Hainstock, 1986). However, the Montessori environment provides the ability for a child to learn at their individual pace. Therefore, the special needs student is served as a whole child in this environment (Meyen, 1995).

Table 2

A Comparison of Special Educational Needs as Governed by Law to the Montessori

Adaptation

<b>Special Educational Needs Governed under The Individuals with Disabilities Education Act</b>	<b>Montessori Adaptation meeting the need</b>
Schools must educate all students with disabilities	Classrooms are set up to facilitate learning at individual levels.
Schools must use nonbiased, multifaceted methods of evaluation to determine whether a child has a disability	Curriculum based on the child as a whole. Subject matters are the practical situation, finger-dexterity exercises, nature study and geography, the sensorial situation, language development, arithmetic Development and measuring exercises.
All children with disabilities, regardless of the type or severity of their disability, shall receive a free, appropriate public education. An individualized education program must be developed.	Children are involved in their own projects. The child will show you at what pace he will learn.

Students with disabilities must be educated with student without disabilities.	Classrooms are designed to facilitate learning at all levels.
Parental consent must be obtained prior to placement decisions regarding special education	All education is based on the child. The child moves to the next step when ready.
Schools must collaborate with parents and students with disabilities in the design and implementation of special education services.	Parents are encouraged to be involved, but modifications are not necessary due to the curriculum set-up.

## Chapter 5

### Teaching Tools for Survival

Why is it so important to change the way special education classes are currently constructed? “After looking at our current system, I found that it was overcrowded and undermanaged. Too many children are in one class, too little trained professionals are in place to handle the system” (Hainstock, 1986). Since, we are not going to change the number of children in place, what do we do to fix the situation? How can we make the pre-primary level of education beneficial for students and, especially, special need students? How do we realistically educate the growing number of special needs students and give the tools necessary for success?

It is clear that the needs of special needs student are not being met, with the organizational measures of our current system (Macht, 1995). The Montessori philosophy provides specific direction to those facilitators to manage large groups of children. Therefore, larger groups of children can be managed, and learn (Hainstock, 1986). It is important to consider early stages of development when educating all children. This is not limited to the child who is developmentally delayed. Children are not typically labeled mentally retarded until the school-age years (Hickson, 1998). Professionally, these children are labeled developmentally delayed. In a model for students with severe and profound mental retardation the model takes as its standard the elements, organization and sequence of normal development (Ibid).

Montessori believed in organizing a classroom to teach children through the simulation of true-life experience. The three principles, which govern the Montessori curriculum are observation, individual liberty and preparation of the environment

(Hainstock, 1997). The Montessori curriculum is divided into seven curriculum categories; The Practical Situation, Finger-Dexterity exercises, Nature Study and Geography, The Sensorial Situation, Language Development, Arithmetic Development and Measuring Exercises (Hainstock, 1997).

The practical life exercises give the students tools necessary for everyday existence. Dressing, cleaning, cooking, manners and self-care are all part of this category. The practical life category allows children to become self-reliant and gives the necessary tools to daily living. This category resembles the section of the SEEC curriculum, which focuses on the self-help skills. This category of the Montessori method is separated into a concentrated focus on self-help and independence skills (Hainstock, 1997).

Finger-Dexterity exercises teach hand-eye coordination as well as help to develop fine motor skills. This exercise is necessary for writing and helps to develop the muscles necessary for writing tasks. This task is a primary focus of The Education Content Approach, which is based on pre-academic skills (Hainstock, 1997).

Nature Study and Geography is a section of the Montessori curriculum, which teaches care of beautiful things around us. Not only does this teaches children respect for the environment, but it teaches the concept of living things and the care of them, as well. This section of the Montessori curriculum is also mirrored in the Education Content Approach of the Special Educational models discussed earlier (Hainstock, 1997).

The Early Sensorial Exercises are designed to develop visual and tactile perceptions of dimensions. The objectives that are designed in these exercises are also implemented in the Amelioration of Deficits Approach, on which the Detroit Preschool

was built on. In the Detroit Preschool, one area of focus was visual perception and discrimination. The exercises in the Early Sensorial Exercises focus on visual perception, graceful movement, touch, ability to concentrate and sense of weight. These exercises also focus on teaching object name and association (Hainstock, 1997).

The last three exercises of the Montessori curriculum are also a focus of the Education Content Approach. Language Development, Arithmetic Exercises and Measuring Exercises. The Measuring Exercises are also a major part of SEEC curriculum. Measuring exercises are necessary for cooking which is a self-help skill (Allen, 1980).

Exercises for each of the categories are in the following table:

Table 3

The Montessori Curriculum and Specific Exercises

<p>Practical-Life Exercises</p>	<p>1-Opening and closing a draw          Purpose: to teach the child an appreciation of quiet and order. To give the child a sense of achievement when he opens and closes the drawers quietly.</p> <p>2-Busy Board or Dressing Frames          Purpose: To teach self-reliance, self-control and coordination of movements.</p> <p>3- Pouring Rice          Purpose: To develop the muscles involved in pouring. To teach the child to pour from pitcher to cup in a neat fashion. To teach self-reliance</p> <p>4- Dusting          Purpose: To learn neatness and responsibility of keeping things neat and clean</p> <p>5-Carrying a chair          Purpose: To teach coordination, independence and concentration. To develop precision and care of handling objects.</p>
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	<p>6- Folding a napkin Purpose: To develop muscular control of fingers. To teach child to help in his own environment.</p> <p>7- Setting a table Purpose: To develop control of movement and coordination. To teach appreciation of manners and social amenities</p> <p>8- Washing dishes Purpose: To teach muscle coordination. To give the child a sense of enjoyment and achievement in doing household chores.</p> <p>9- Washing hands Purpose: To learn control of movement and complete a cycle of activity. To teach care of self and self-reliance</p> <p>10- Washing a table Purpose: To teach care of environment, sequence of action and control of movement.</p> <p>11- Shining Shoes Purpose: To teach the care of personal possessions. To develop coordination and dexterity</p> <p>12- Lacing a shoe Purpose: To teach the child independence in dressing himself. To develop hand-eye coordination and muscular control.</p> <p>13- Tying a Bow Purpose: To develop muscle control. To learn completion of a cycle. To teach independence in dressing oneself.</p>
Finger-Dexterity Exercises	<p>1- Bead Stringing Purpose: To teach hand-eye coordination and finger dexterity</p> <p>2- Bottles and tops Purpose: To teach proportion, hand-eye coordination and finger dexterity.</p> <p>3-Using a Dropper Purpose: To develop finger thumb coordination.</p> <p>4-Cutting Purpose: To develop hand-eye coordination and develop muscles used for cutting.</p> <p>5- Painting and Coloring</p>



	<p>Purpose: Begin with finger painting to develop muscle tone in fingers and hands.</p> <p>6-Drawing Purpose: Develop muscles necessary for holding a writing utensil.</p> <p>7- Working with clay Purpose: Development of finger and hand muscles.</p> <p>8- Doing Puzzles Purpose: Hand-eye coordination</p> <p>9-Sewing Purpose: Develop hand-eye coordination and self-reliance. To develop finger dexterity.</p>
Nature Study and Geography	<p>1- Plant a bulb or seed, or small garden Purpose: Teach a child to care for something else. Teaches responsibility.</p> <p>2- Classroom animal Purpose: Teach the child respect for a living thing. Explain the parts and other animals like the classroom one.</p> <p>3- Plastic animals or pictures Purpose: Teach the child about living things in their environment.</p> <p>4-Map puzzle Purpose: Teach location.</p> <p>5- Culture days Purpose: Teach children about different religions and culture. Teach the child respect for diversity. Teach the child tolerance for other people.</p> <p>6- Cook food from a different culture Purpose: Teach children about different religions and culture. Teach the child respect for diversity. Teach the child tolerance for other people.</p> <p>7- Study clothing from other parts of the world. Purpose: Teach children about different religions and culture. Teach the child respect for diversity. Teach the child tolerance for other people.</p>
Early Sensorial Exercises	<p>1- The Tower Purpose: Develop coordination of movement and visual and tactile perceptions of dimensions</p>

	<p>2- Cylinders and Solid Insets Purpose: Preparation for holding pencils. Muscular coordination for hands and arm.</p> <p>3- Fabric Basket Purpose: Develop and refine the tactile sense</p> <p>4- Thermal Bottles Purpose: Identify similar and different temperatures.</p> <p>5- Button Games Purpose: To teach the child different colors, sizes and shapes.</p> <p>6- Rough and Smooth Boards Purpose: Develop awareness of textures. Develop light touch necessary for writing.</p> <p>7- Silence Game Purpose: Develop ability to concentrate.</p> <p>8- Walking in line Purpose: Stress good balance, posture, and graceful movement .</p> <p>9- Baric Tablets Purpose: Develop sense of weight</p> <p>10-Sound Bottles Purpose: Develop sensitivity of the auditory sense.</p> <p>10- Scent Bottles Purpose: Develop sense of smell</p> <p>11-Geometric Insets Purpose: To learn different shapes, hand-eye coordination and learn geometric forms and gradual change of forms.</p> <p>12- Naming the color Purpose: Teaching object and name association.</p>
Language Development	<p>1- Sandpaper letters Purpose: recognize the forms of letters through feel.</p> <p>2- Command Cards Purpose: Associate written word with action.</p> <p>3- Picture and Sounds Purpose: Familiarize the child with alphabet sounds.</p> <p>4- Movable Alphabet Purpose: analyze and form words to prepare for reading, writing and spelling.</p>

Arithmetic Exercises	1- Number rods Purpose: Familiarize the child with names of numbers and quantity. 2- Spindle Box Purpose: To introduce zero. To teach association of number and quantity. 3- Sandpaper numbers Purpose: Introduce numbers and teach the association of number name and corresponding quantity. 4- Writing Numbers Purpose: Teach fundamentals of writing. 5- Number Progression Purpose: Building of sequence of numbers and to have a visual impression of odd and even numbers. Prepare the child for mathematics.
Measuring Exercises	1- Make a favorite food Purpose: Teach hand-eye coordination and introduce fractions.

Note: from "Teaching Montessori in the Home - The Pre-School Years" by Elizabeth Hainstock, 1997

Based on the comparison of the Montessori Curriculum to several different Special Needs Curriculums, I believe that the Montessori Curriculum represents a more complete picture of life for the student. The Montessori environment is a representation of a world that all children have to live in. It is important to teach children to be prepared for life; therefore, I feel it is important to seriously look at this curriculum as a possibility for future standards in educating special needs students.

One of the criticisms about the Montessori classroom is that it presents a utilitarian and structured atmosphere and that its materials are too restrictive. The method itself is not structured, but the approach of many of the teachers is (Hainstock, 1986). Although the Montessori method adheres rigidly to the concept of three specific principles, it achieves great flexibility in learning situations (Ibid). This is due to the development of the

manipulative being self-correcting. Montessori's method pays close attention to the early transformative processes than any other known to us (Standing, 1950).

Although special education needs continue to evolve, there is more room for growth. Special Education is the pedagogy of teaching children rather than the policy of implementing programs as such. Some of the benefits and challenges that each educational approach faces are outlined in the following table.

Table 4

The Comparison for the Special Education Environment and the Montessori

Environment:

<b>Special Education Environment</b>	<b>Montessori Education Environment</b>
Structured setting	Structured setting
Ability to focus on small groups	Ability to facility larger groups
A controlled environment with specific activities chosen for the child	A controlled environment with choice for the child to pick activity
Governed by legislation	Governed by a board of educators
Accountable to law	Accountable to standard of education
Teachers hold four-year degrees. Takes longer to complete. Cost more money	Facilitators hold two-year degrees. More affordable to obtain. Takes less time.
Dependent learning environment due to activity	Organized independent learning
Based in servicing the child through legislation.	Based in the growth and development of the child.

Note: From "Special Education's Failed System: A question of Eligibility" Macht, 1998 and "Maria Montessori: Her life and Work" Standing, 1984.

Both the Special Education environment and the Montessori environment have some form of structure. The Special Education environment facilitates small numbers of students in specific areas of curriculum. The Montessori environment facilitates larger numbers of children in many areas of development. The Special Education models used today give choice within specific objectives designed in that curriculum. The Montessori

curriculum gives choice in many different areas of curriculum. The Special Education Environment is governed by legislation, whereas, educators govern the Montessori environment. Although Montessori educators do hold a teaching degree, the cost and time of obtaining the Special Education degree is more extensive. The Special Education environment is based on the designated services outlined by rules of law, whereas, the Montessori environment allows the natural ability of the child to govern development and educational growth.

Although no one set of curriculum is the perfect answer, we must look at each as a whole. When doing so it is important to consider the number of children we are trying to educate, and the available resources. Although the focus of education is children, we must be realistic in knowing what tools we have to reach them. The Montessori environment not only facilitates larger numbers of students, but also is developed based on the laws of human nature, as noted earlier. The Montessori environment is a combination of several specific educational programs currently used, and was developed to address all areas of the child.

It is clear that the Montessori philosophy would, indeed, be a program to consider when looking at the needs of special education. The Montessori philosophy was, in fact, started for children who were at risk, and it is time to take the philosophy back for those same children (Montessori, 1920). The number of special-needs children has not decreased since Montessori created her philosophy (Brennan, 1987). The special-education population will only continue to grow (Hickson, 1998). We must implement a program that will, likewise, continue to grow, and meet the needs of our future adults by adequately, and truly, meeting their needs.

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