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MONTESSORI ADOLESCENT PROGRAM DESIGN

IN A NON-FARM ENVIRONMENT

A MASTER'S THESIS SUBMITTED TO THE FACULTY OF BETHEL UNIVERSITY

BY

RHONDA M. LOVETTE

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MONTESSORI ADOLESCENT PROGRAM DESIGN

IN A NON-FARM ENVIRONMENT

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September 2017

APPROVED

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Praise God from whom all blessings flow! Praise Him all creatures here below! Praise Him above ye heavenly hosts! Praise Father, Son and Holy Ghost! Amen!

Foremost, in everything, I praise and thank my Heavenly Father for the call and mission he has placed on my life. I know it is through His strength and blessings that I have completed this thesis and continue to work with my HIgHers. I wish to honor my father and my mother, Ron and Marcia Lovette, as they continue to trust and obey His Word, and mentor me in my faith walk. To my husband, Gary Mundfrom, and my children: Signe, Soren and Eben; I have been shown the true meaning of grace, patience and undying support. Thank you for all the sacrifices you made on the home front, when I was immersed, or should that be submersed, in this thesis project. You are my beloved. Thank you Michelle Thompson for joining me in the vision of extending the scope of Hand In Hand Christian Montessori. Your advice, observations and guidance have been invaluable. Dr. Kaatz, thank you for all of your advice, edits, and consistent encouragement. Thank you for working with me at my pace with such grace and kindness. I dedicate this work to my "beautiful messes": the HIgHers. Thank you for *your* work, patience, understanding, flexibility and love as this program continues to improve. Your potential inspires me as I see you grow into the person God has created you to be.

Abstract

This thesis explores the idea of constructing a Montessori adolescent program outside of the prescribed curriculum of living in a working farm environment. There is a focus on Maria Montessori's life and influence. The Montessori Method is briefly explained. Early adolescents, ages 12-15, have different needs than elementary children do; therefore, this thesis strives to design an early adolescent program located in a non-farm setting. Montessori is based on three tenets: the prepared environment, developmentally appropriate materials and the prepared adult. This has been very well developed and applied for pre-school and elementary age children, however, not as well in the adolescent ages (12-18). Finally, the author discusses personal experience in employing these principals and pillars at Hand In Hand Christian Montessori in the HIgH program. Examples are provided that have been developed and refined for a school population to include a scope and sequence, and a curriculum map.

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Chapter I

Introduction

The overall guiding question for my thesis is "Which aspects of Montessori Adolescent Theory are essential to the design of a successful Montessori adolescent program in a non-farm setting?" This question opens the floodgates for a plethora of inquiry for those who are not familiar with Dr. Maria Montessori and her pedagogy. Why Montessori? What school has a farm as its center? If a farm is this educational model's center, why are you trying to create one **off** the farm?

My family is privileged to have found Hand In Hand Christian Montessori. I was homeschooling three children, ages four, seven and nine, looking for educational options, which would allow me to remain, involved in my children's education. At that time, Hand In Hand was a three day homeschool academy; three days in class with Montessori teachers and materials followed by two days at home. Perfect! And it truly was. The problem was this school ended at age 12. There was not a middle school option. I wanted more. I wanted my children to continue to be nurtured and educated in this child honoring way, Christ-centered way.

After speaking with the dean and founding parent of Hand In Hand and receiving her support in regards to my vision to expand the scope of the school, I encountered a problem. Montessori adolescent training courses were non-existent. How was I going to make this happen? I started researching. I enrolled at Bethel University in their Master of Arts in Teaching program. I wrote and presented a proposal to current Hand In Hand parents who had children in the target age group. I dug in. I continue to dig in. During my last semesters of coursework in 2008 at Bethel University, I launched my inaugural adolescent class at Hand In Hand. With faith God was guiding this project and with the trust of faith-filled parents who entrusted me with their children, the program continued with triumphs and challenges. More reading and research ensued; adjustments and changes were made. Four years later, in the summer of 2012, a new opportunity arose that would help me answer my burning question: a Montessori Adolescent Orientation was offered in the Twin Cities at St. Catherine's University. I went. I came away with a greater understanding of what a Montessori Adolescent environment and curriculum could look like in a non-farm setting. More modifications were made and continue to be made. The guiding question was beginning to be answered; Hand In Hand HIgH was born.

Purpose of Thesis

At this time, Hand in Hand enrolled students from infant to age 12. Early adolescence, defined as ages 12-15, is a crucial developmental period; the habits of thought crystallized during this time can have long-term effects on life-long learning, quality of life, and career success (Csikszentmihalyi & Schneiderm 2000; Sternberg, 2001). Although the Montessori philosophy is known primarily for early childhood education, Maria Montessori also wrote about the education of adolescents. She commented (cited in Standing, 1984, p. 116): "There is born with him a new 'sensitive period' which reveals itself a greatly increased sensitiveness to all facts and experiences which related to his life as a social being." The adolescent is becoming a socially conscious individual, therefore, educational contexts needed to accommodate this developmentally appropriate change. In practical terms, this means supporting the need for adolescents to explore their interests independently and actively in a supportive, collaborative community, side by side with adult guides. Respect for the adolescent is of the ultimate importance and must be actively practiced at all times (Montessori, 2007-b, pg. 72).

Dr. Montessori also purported that the ideal environment for adolescents during this developmental period was a working farm.

... it is helpful to leave the accustomed environment of the family in the town and go to quiet surroundings in the country, close to nature. Here an open-air life, individual care and a non-toxic diet, must be the first considerations in organizing a "centre for study and work" . . .Life in the open air, in the sunshine, and a diet high in nutritional content coming from the produce of neighbouring fields improve the physical health, while the calm surroundings, the silence, the wonders of nature satisfy the need of the adolescent mind for reflection and meditation. . . .work on the land is an introduction both to nature and to civilization and gives a limitless field for scientific and historic studies. . . .the land-child must see that society is in a state of ascent from nature in which he, as a civilized and religious man must play his part. (Montessori, 2007-b, pg. 66-69)

This tenet of her educational philosophy added to the challenge of my quest. The questions that guided my research, creation and implementation of the Hand In Hand HIgH program are:

(1) What are the key elements needed in a Montessori Adolescent Program that will support academic needs and allow for students to explore their independent interests within an encouraging, collaborative community? (2) What would an urban environment contain when it is not feasible for it to be located on a working farm, such as Dr. Maria Montessori envisioned?To help answer the question, a history of the Montessori Method, as well as a short biography of La *Dotteressa* herself, is essential.

Maria Montessori

Maria Montessori (1870-1952) came from a family who valued education. Her father was a traditional thinking man and an accountant for the Italian civil service; her mother, Renilde, was an intelligent, religious, modern thinking woman from a wealthy family who buttressed her daughter's career choices. Her daughter embraced her mother's religious convictions and they influenced her thinking throughout her career. They both wished for Maria Montessori to become a teacher, which was deemed an acceptable profession for a woman at that time.

However, young Montessori, is reported to have had a "strong will and sense of self as well as a desire for leadership" even at a young age, had no interest in a teaching career (A biography of Dr. Maria Montessori, 2015; Hainstock, 1986, p. 9). During the years 1886-1890 she entered an all male technical school with aspirations of becoming an engineer During her education at the University of Rome as a student of mathematics, physics and natural sciences she felt her inclinations growing towards biology. "I *know* I shall become a Doctor of Medicine" (Standing, p. 24; Hainstock, p. 9).

This decision was not supported by her father, although her mother had confidence in Maria and was her supporter and sympathizer: "Though her father strongly disapproved of the line she had taken, her mother, Renilde Montessori, never doubted her daughter's ability to make good in the path she had chosen" (Standing, 1962, p. 26). It is important to note that even though her father did not endorse his daughter's choice of education or career, he was dutiful to her and went with her to and from classes for it was not considered proper for a woman of her age to appear solo in public (Hainstock, 1986, p. 9).

The disappointment of her father was only the first of several struggles she faced and overcame in her effort to enter medical school. She was denied entrance to the medical program by the head of the school. It took the intercession of Pope Leo XIII to enable Maria Montessori to enter college and eventually the Faculty of Medicine; she was thus the first woman to be admitted to a medical school in Italy (A biography of Dr. Maria Montessori, 2015).

Attending medical school was not an easy task for Montessori; nonetheless her self-willed independence streak served her well her. She refused to bow to convention. For example, cadaver work is required in every medical program. Due to societal constraints at this time, dissections of cadavers were not performed in mixed company. Therefore, she often worked alone after hours in order to complete her academic studies. Eventually, she gained acceptance by her fellow male students. In 1896, Maria Montessori became the first woman to graduate as a doctor of medicine. She also ranked among the highest in her class: La Dotteressa Maria Montessori (Hainstock, 1986, p. 10).

Rationale and Guiding Question

Based on her scientific observations of the children, she developed her Montessori Method of education. She noticed that children had an uncanny ability to soak in knowledge and learn from their environment. She also noted the children never tire of working with their hands, often repeating the same task over and over until they were satisfied (Montessori Australia, n.d.). She watched children choose work over play, shun outward rewards, revel in silence and create their own personal dignity (Standing, p. 42-46). Thus, the Montessori Method rests on three tenets: the prepared environment, developmentally appropriate sensorial materials and following the child. To that end is the heart of my questions: which elements of Montessori Adolescent Theory are essential for an developmentally based adolescent educational program within and urban setting?

Summary of Chapter I

Maria Montessori saw within children the opportunity to release their entire Godgiven potential. Despite societal and familial objections and other impediments, she triumphed and became the first female doctor in Italy. Through her medical career she became an educator. Dr. Montessori transferred her love of education and learning into her Montessori Method: pedagogy based on scientific observation. Her efforts were rewarded by three nominations for the Nobel Peace Prize as well as fervent followers and the spreading of her the Montessori Method.

Reforming models of education is not a new concept. Montessori's ideas were revolutionary due to her approach to the child. In her view, schools are a depository for children until they can function without disturbing the adult world. In 1938, she writes about the fate of children:

... he is banished to school, to that exile which adults reserve for children until they are able to live in the adult world without disrupting it. Only then can he be admitted to human society. First he must submit to the adult like someone with no civil rights, since from a social perspective he does not even exist. (Montessori, Oswald, & Schulz-Benesch, 1997, pg. 2) Dr. Montessori was a product of the reform era in which she lived. She witnessed needed social reforms for adults in the workplace and within society. Fittingly, she brought to the forefront the social rights of the child and challenged all adult kind to tear down pre-existing prejudices. The removal of prejudices has naught to do with what has or has not been presented to the child as education; it is the very idea that a child can be "changed or improved" only via teaching. It is contained in the very perception of the child (Montessori, et al., 1997, p. 4).

This prejudice impedes the understanding of the fact that the child constructs himself, that he has *a teacher* within himself and that this inner teacher also follows a programme and technique of education, and that we adults by acknowledging this unknown teacher may enjoy the privilege and good fortune of becoming its assistants and faithful servants by helping it with our co-operation. (Montessori et al., 1997, p. 4)

These prejudices have taken different forms within our country's educational journey; they will be discussed here. History is what forms the present. Ergo, to know where we come from educationally allows scrutiny of the Montessori method as specifically applied to the designed adolescent program.

Chapter II: Literature Review

Introduction

Explanation of the Montessori Method

This brief history of Dr. Montessori's struggles and triumphs is important because it was her medical practice that shaped the Montessori Method of education. She returned to the university to focus on psychiatric care; her special interest was children (Hainstock, 1986, p. 10). On one of her excursions to evaluate patients to be treated at the clinic, she visited an asylum for children who were mentally delayed. The staff at the asylum was disgusted that the children could not be dissuaded from grabbing the crumbs off the floor after eating. As per her medical background, Montessori carefully and scientifically observed the children in their sparse environment.

Within the walls of the prison-like room where these "idiot" children were living, she noted the children lacked toys, materials, any external stimulation at all. In her observations, she saw more than food hunger within them; she saw a craving for intellectual stimulation through their hands. They were literally grasping at the only "material" in the room: crumbs.

That form of creation which was necessary for these unfortunate beings, so as to enable them to reenter human society, to take their place in the civilized world and render them independent of the help of others—placing human dignity within their grasp—was a work which appealed so strongly to my heart that I remained in it for years. (Standing, 1962, p. 28-29) Dr. Montessori came to the conclusion that the environment the children were living in was furthering their disorders. Montessori believed the lack of sensory stimulation and purposeful work for their hands hindered any progress these children might make (Standing, 1962, p. 28).

Fervent in her desire to help children, she studied the work of Jean-Marc Itard (1775-1838) and his student, Edouard Séguin (1812-1880). Her desire to completely and correctly understand their work led her to translate the French into Italian herself. La Dottoressa's approach was logical and full of common sense. From Itard she incorporated and prioritized observation of education through the senses into her method by scientifically and mathematically designing what are called "sensorial materials" which are used in the classroom (Montessori Australia, n.d.).

From Séguin she embraced the idea of respect and understanding of each individual child; this became known in the Montessori Method as "following the child." She continued to expand her knowledge of educational practices and studied the works of Rousseau, Pestalozzi and Froebel. What these three practitioners had in common was the belief that the child held within himself everything needed to reach his ultimate potential and to fully develop along the "natural lines" already there (Montessori Australia, n.d.).

Another important figure influencing La Dottoressa's path was Giuseppe Sergi. She used his lessons in anthropology and scientific investigation to explore educational environments. The Montessori Method stressed "early cognitive learning in a prepared environment, directed by a teacher and reality oriented" (Hainstock, 1986, p. 2). This was and is in many educational systems today, a foreign concept. As her educational theory matured she nurtured the idea implementing social reform through education: "The child is both hope and a promise for mankind" (Baltimore City Public Schools, n.d., para 12).

La Dottoressa's first chance to implement sensory learning materials (from the influences of Itard and Seguin) into a classroom environment came from a practice demonstration school in Rome founded by the National League for Retarded Children. Her 22 students in the Orthophrenic School of Rome were given lessons on materials designed by Dr. Montessori. (Lynchburg College Symposium Readings, 1997, p. 311) The children she was given were thought to be unable to learn. Yet they were now able to care for themselves and passed exams with the proficiency of "normal" children. These results now distinguished her as an educator instead of a physician. Through the incredible results with the "retarded," she wished to use this approach with normal children (Hainstock, 1986, p. 12).

After I had left the school for deficient, I became convinced that similar methods applied to normal children would develop or set free their personality in a marvelous and surprising way . . .A great faith animated me, and although I did not know that I should ever be able to test the truth of my ideas, I gave up every other occupation to deepen and broaden its conception . . .It was almost as if I prepared myself for an unknown mission. (The Montessori Method, p. 33; Hainstock, p. 12)

In 1911, she left the University of Rome and her private medical practice to focus solely on education. Dr. Montessori's desire to help children was so strong she decided to leave her university appointments and her medical career to serve in a run down area in Rome called San Lorenzo. There she set up her first Casa Dei Bambini or Children's House. Later, teacher-training courses were held in Rome. As she concentrated on developing her method and setting up teacher-training courses, model schools were set up in Paris, New York and Boston. Her first book entitled *Il Metodo della Pedagogia Scientifica applicator all'educazione infantile nelle Case Dei Bambini (The Montessori Method: Scientific Pedagogy as Applied to Child Education in The Children's Houses)* was translated into over 20 languages. In 1912, the English version of her first book sold out and was second on the year's non-fiction best-seller list.

As her message spread, the movement grew; international training courses were created and she crossed Europe giving lectures at the invitation of universities and city governments. Unfortunately, at the same time another movement was growing: Nazism. Hitler and Mussolini were both intrigued by her method as a tool of mass indoctrination. She continued to live in Italy under Fascism and Mussolini. Mussolini even became the President of the Montessori Society of Italy. Montessori schools were abundant in Italy but by 1934 hostility had grown between Montessori and Mussolini's leaders (Montessori Australia, n.d.).

In 1935, the Nazis thoroughly obliterated the Montessori movement in Germany by closing all Montessori schools. All of Italy's Montessori schools were shut down the following year. Even so, the International Montessori Congresses and training courses continued worldwide. Dr. Montessori, now with the aid of her son, Mario Montessori, continued to educate educators and write lectures and books. She and Mario fled to Barcelona, where again, war pushed them out of the country to England. While in England she presided over the fifth International Montessori Congress. In 1939, they went to India to begin a course and found a training center. War again, intruded into Maria Montessori's life (Montessori Australia, n.d.).

La Dotteressa and her son, Mario, were in India, when in1940, Italy sided with Germany and joined the war. Because of their Italian citizenship, Mario Montessori was confined by the British colonial government as an "enemy alien," while Dr. Montessori was restricted to the compound of the Theosophical Society of India. Luckily, the Viceroy held great respect for Maria Montessori and released Mario to honor her on her 70th birthday. Still, they were not allowed to leave India until the war was over.

Dr. Montessori's first nomination for the Nobel Peace Prize was submitted in 1949. She was nominated again in 1950 and 1951. This was also the year *The Formation of Man* was published, her last notable work. Dr. Maria Montessori passed away on May 6, 1952 in Noordwijk aan Zee, Netherlands and is buried in the Catholic cemetery there (Association Montessori International, n.d.-b). After her death, her son Mario carries on her legacy until his death in 1982 (Association Montessori International, n.d.-a).

The legacy of Maria Montessori is her educational method; it is based on scientific observation and was built by discovery first, then, the method was designed (Standing, 1986, p. 42). This kind of education reform, which honored the child and trusted the axiom that children teach themselves, gained popularity and implementation world wide, including the United States. Dr. Montessori's vision for education reform and education for peace had the support of Alexander Graham Bell and his wife, Mabel, who stared the Montessori Education Association out of their home in 1912. Dr. Montessori included among her friends and fellow reformers, Helen Keller and Thomas Edison.

Edison had strong opinions about education. Most schools, he believed, taught children to memorize facts, when they ought to have students observe nature and to make things with their hands. "I like the Montessori method," he said. "It teaches through play. It makes learning a pleasure. It follows the natural instincts of the human being . . . The present system casts the brain into a mold. It does not encourage original thought or reasoning" (National Park Service, n.d.).

The first American Montessori school started in Scarborough, New York in 1911. Thomas Edison and Alexander Graham Bell aligned their names with the movement as popular journals reported on "miracle children" coming out of these schools (American Montessori Society, n.d.). Her radical educational reform and approach gained further fame when she held her glass house schoolroom exhibit at the Panama-Pacific International Exhibition in San Francisco in 1915 (Montessori Australia, n.d.).

As a matter of fact, when one attempts to explain this method in concrete terms, it is necessary to discuss child psychology, for it is the psychology of the child, the life of his soul, that has gradually dictated what might be called a pedagogy and a method of education. If I can be said to have a method of education, it is one based on the psychic development of the normal child. (Montessori, 2007, p. 76)

In developing her pedagogy, Dr. Montessori insists that we consider the whole child, not as incomplete and incapable without adults but as a whole and complete person in her own right. She uses a parable about a jewel to explain her viewpoint. In this parable, she finds a diamond encrusted in its matrix straight from the ground: dull, dirty, seemingly of no value. Then, she tells of cleaning the mass to make plain a bright jewel. When looking at the jewel, some might ask her, "How did you attain this precious stone that mirrors the light without fault?" She would reply that we are not the creators of the precious jewel in our hands; it was already there buried beneath all the external material.

This is a picture of the child. If we look closely, he shows us how he should best be treated and has splendor to reveal to us (Montessori, 2007, p. 77). This is the key to the Montessori Method; the child creates herself when given a suitable environment. As Dr. Montessori said, "The child is not simply a miniature adult. He is first and foremost the possessor of a life of his own that has certain special characteristics and that has its own goal (Montessori et al., 1997, p. 118). The adolescent is a sacred mystery where the adults must always respect the individual and the process and be their champion. The question then becomes: What are the foundational elements needed within an adolescent program?

The Four Planes of Development

Within each child there are fundamental human needs and tendencies in each of the four developmental planes or stages (see Figure 1). The first plane child (birth to six years) is considered to have an "absorbent mind" and brings to consciousness what was unconscious through movement. The child develops intelligent hands under the direction of the mind then attaches language to it. The second plane child (six to 12 years of age) has a reasoning mind; she asks why, how and when. This is also the age of imagination and she has a strong interest in what is fair and just. The third plane child (ages 12-18) is akin to the first plane child as it is time for ordering herself by experiences. In this plane, the focus is service to humanity as well as for a personal vocation. The adolescent is wholly idealistic. The fourth plane (ages 18-24) allows for the finalization of the species development and ideally is the completely formed and normed human (O'Shaunessy, 2012).

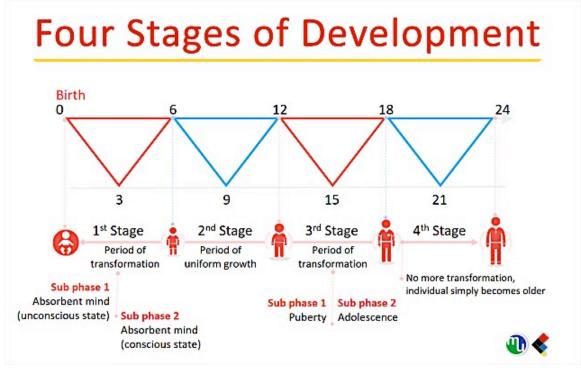


Figure 1. This is one version of Dr. Montessori's four planes of development. Red symbolizes the active and absorbent periods for acquiring knowledge and skills. The red triangles are also divided into sub-phases as noted in the graphic. Blue indicates the calm after the storm where the gained knowledge is practiced and reflected upon. From "The four stages of development", by Montessorians United, 2016,

montessoriansunited.blogspot.com

The Human Tendencies and Needs of the Adolescent

For the adolescent in the third plane of development, the human tendencies can be generalized as such: orientation (finding a point of reference), order work/activity, self-perfection/ exactness/repetition, abstraction, communication and imagination (Ewert-Krocker, 2012). Orientation refers to the need of the adolescent to discover how she can be meaningful in the world. She creates a more complex sense of belonging in the larger society beyond the immediate family. She endeavors to balance adult expectations and

behaviors with his hormone infused expectations and behaviors within a social structure. Therefore, an adolescent program needs to speak to all of these needs and tendencies (Ewert-Krocker, 2012).

The adolescent seeks order at this time in his life, not necessarily in the physical realm but more within the social realm: What are the hierarchies and networks? Who's in charge? When do I get to be in charge? Not only is order needed in the social arena, but this also refers to an order of priority—what is most important and pressing for them. What issues are on the forefront? What is relevant (Ewert-Krocker, 2012)?

The adolescent needs work and activity in his developmental plane. Work serves to support the creation of the adolescent self in a variety of ways. Working with peers and adults offers the opportunity to understand human collaboration; it gives the definition of the meaning of work as well as why it is important. At this stage they need to work with their whole bodies to complete a task; they need to adapt and to change the landscape. Within the opportunity to work, the adolescent can try out different job roles, tasks and occupations. Speaking to their need to work socially, they need to care for the environment at a community level. Work gives the learner the ability and practice to establish skills needed as an adult (Ewert-Krocker, 2012).

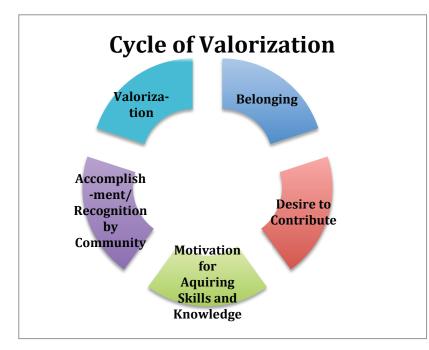


Figure 2. Cycle of Valorization. Due to the adolescent's desire to belong, she desires to contribute to her peer group. This creates motivation for her to acquire skills and knowledge that is recognized and valued by the community which then generates an authentic sense of belonging. This is valorization. From Ewert-Krocker, 2012.

Self-perfection is directly related to the valorization of the adolescent. Valorization of the adolescent is sensitivity within him where his successful contribution to their society needs to be felt and his voice needs to be heard (Kahn, 2012). Valorization is the bottom line of an adolescent's work. Valorization always occurs within a social context. It entails a genuine experience of belonging where real, adult-like contributions are recognized and valued by the community. Valorization is surrounded by a climate of encouragement and support to work hard and be challenged. It allows for diverse opportunities for independence. See the Cycle of Valorization chart below (Figure 2).

Repetition continues to be a mainstay of the developing personality in this, the third plane of development. It occurs in imitation of others, of repeating behaviors adolescents feel they want to be a part of their identity. In this plane, their self-image as perceived by others becomes more important to them. A sense of belonging and acceptance is a critical theme in valorization. There is a cycle to valorization: Cultural messages influence him and he is completely absorbed in self-formation (Lovette, 2012). Valorization cannot happen unless the adolescent understands the accomplishments of others over himself (Kahn, 2012).

Meta-cognition is acquired at this age; he is able to think about how he thinks. This allows him to begin to see other perspectives and his new global vision leads to passion for causes that are a priority in his experience. During this stage, he begins to manipulate ideas and concepts in the mental realm—abstraction. Wholly idealistic, their problem solving gets more grandiose before becoming precise and realistic. (Ewert-Krocker, 2012)

Communication is a way for the adolescent to express emotions, feel connected in groups, test out perspectives and to feel that their voice is heard. Self-expression is self-construction for the adolescent. Use of the arts can indirectly communicate what is inside of the personality. All of these types of communication serve to help him process ideas and come to self-understanding. Dialogue with peers and adults lead to self-awareness (Ewert-Krocker, 2012).

In the third plane of development, the adolescent imagines herself much larger and much smaller than she actually is. She is developing the scale, through social experience, discerning what she can do is important, valuable and productive. Imagination takes place when she imagines herself in different roles, as a different kind of person in the future. Powerful, adult-themed dramas are commonplace during this plane. She imagines what is possible in changing the world and what her part in it might be; it is essential that she imagine the world, the future and herself optimistically (Montessori, 2007-b, p. 73).

The Erdkinder Farm

Montessori decreed that the best environment to meet the needs of the adolescent was on a working farm, away from parents and cultural obstacles. She writes,

...during the difficult time of adolescence it is helpful to leave the accustomed environment of the family in the town and go to quiet surroundings in the country, close to nature. Here, an open-air life, individual care, and a non-toxic diet, must be the first considerations in organizing a "centre for study and work."

(Montessori, 2007, p. 67)

The prepared environment, the structures of the program, the activities and opportunity offered and the adults in the environment need to support the free development of the individual personality and genuine experience of social organization. (Ewert-Krocker, 2012). Montessori explains, "The environment must promote not only the freedom of the individual but also the formation of a society. The education of humanity must rest on a scientific foundation and follow from it every step of the way (Montessori, 2008, p. 103).

Education on the Montessori Farm, or "Erdkinder" (which means land-children), is to be three microcosms of society: a shop, a farm and a hotel/residence. Within those three social structures there is the place and opportunity to experience social structure that prepares one for adult life. There are practical life skills, which include the care of self, of others and of the environment. These versions in miniature also provide the genuine, adult-like experiences that speak to the adolescent's need for order, valorization, imagination, self-perfection, etc. The work needed to sustain these three small-scale versions of society is inherently valuable as practice for working in collaboration with others and ascribes value to the work itself (Ewert-Krocker, 2012; Montessori, 2007-b, p. 80).

As for the educational syllabus (psychic development) for the adolescent, Dr. Montessori divided it into three distinct yet interconnected areas: self-expression, i.e. arts; psychic development, i.e. language, math, and moral education: the preparation for adult life, i.e. study of the earth and living things, of human progress and building of civilization, and of the history of humanity (Montessori, 2007-b, p. 75-76).

Laurie Ewert-Krocker summarizes Dr. Montessori's Plan of Study and Work in detail. General guidelines and pedagogical ideals need to be met at the outset. This includes the axiom that human beings construct themselves by interacting with, adapting to and changing their environment. The activities we as adults introduce are chosen for their developmental value to the age group by careful observation over time. Activities respond to all aspects of human development, a.k.a. the whole child (mind, body and spirit). Activities are prepared so adolescents are challenged and are likely to succeed and be independent at some point. Difficulties or obstacles in an activity are isolated so individuals can focus on the element of challenge, one at a time, with built in controls of error (Ewert-Krocker, 2012).

First and foremost, the environment is paramount. But when a working farm is not a feasible option, curriculum creation needs to incorporate as many of the fundamental elements within an urban setting. Next, this thesis will look at what the research as well as real-life implementation recommends.

Chapter III

Montessori Adolescent Curriculum Design in an Urban Setting

In order to create a Montessori pedagogy and curriculum with the adolescent at the center, three concepts must be addressed.

(1) Montessori's vision of the adolescent

(2) The fundamental needs of the adolescent

(3) The role of the prepared adult

Montessori observed, when trying to define her method in specific terms, child psyche is at the center. For her, the psychology of the child, the very life of his psyche contains the whole of her pedagogy and system of education. She goes on to say,

I believe that the child himself must be the pivot of his own education-not the child as people ordinarily think of him, but rather his innermost soul, seen from a perspective that was unprecedented before the advent of what has been called the Montessori Method. (Montessori, 2008, p. 76)

Her vision is based on three tenets (Ewert-Krocker, 2012):

(1) The development of the individual

(2) The adolescent as a social newborn

(3) The adolescent as a sacred mystery

In regards to the development of the individual, each one needs to be seen as a unique organism. This organism needs to be fostered and nurtured all within the context of their drive to be a part of society (Ewert-Krocker, 2012). Central to this theme is the concept that the child constructs herself. "The child has a mind able to absorb knowledge. He has the power to teach himself" (Montessori, 1995, p. 5-6). Therefore, the adolescent must have the opportunity and environment to learn by her own individual activity, loosed with the freedom to search for and grasp what she needs in order to complete her work (Montessori, 2007, p. 5). Behaviorists' approach to education relies on rewards to gain a desired behavior. In contrast, the Montessori Method is designed for inner motivation and drive to propel the learner's education. She observed that when a

. . .child who has never learned to work by himself, to set goals for his own acts, or to be the master of his own force of will is recognizable in the adult who lets others guide him and feels a constant need for the approval of others.

(Montessori, p. 18-19)

She explains further.

This development takes place because the child has been able to work and to be in direct contact with reality. It does not come from anything we teach the child; it is a definite, constructive process, a natural phenomenon that results when the child is given the chance to make his own efforts and do his own work without intermediaries. . .What motivates the child is thus not the goal set for him by the adult, but his own drive for self-perfection. The child perfects himself through contact with reality, through activity that absorbs all his attention. . .The child has his own way of working, a way different from ours that we must understand and respect. (Montessori, 2007, p. 78-79)

Unique to Montessori, are her four planes of development. (See Fig. 1). She juxtaposes the adolescent with the newborn. However, instead of the physical environment

that the newborn is learning how to navigate, the adolescent is learning how to navigate a social environment. Montessori states, "...the spiritual embryo also needs the protection of a living environment warmed by love and rich in sustenance, in which everything is designed to foster its growth and there are no obstacles in its way (1997, p. 45). An adolescent has a raw brain that is wired for social activity but as of yet, cannot move within it very well. It's difficult for them to comprehend what is happening (Ewert-Krocker, 2012).

There are two major transitions that are taking place simultaneously: physical change and societal change. Physically, they are in puberty, moving from childhood to adulthood. Psychologically, they are moving from someone who has to live in a family to a person who has to live in society (Montessori, 2007, p. 60). Within the immediate connections in an adolescent's peer group, the notion of gratitude in recognition that society is built upon the efforts and work of those who came before us. In Montessori's words, "It is necessary to arouse that religious sentiment of gratitude that was given to God also towards man. Religious respect for sacred humanity as the effective dispenser of God's mercy must be aroused in the coming generations" (2003, p. 132).

This then leads to the third tenant of her vision: the adolescent as a sacred mystery. Within this is the most important role of the guiding adult in the environment. As adults we come with prejudices or pre-judgments of adolescents. This includes the roles we assume for ourselves. Traditional education places the teacher at the center as the fount of all knowledge whereas the Montessori Method places the child at the center. Using the analogy of a gold mine, in traditional education, the teacher is the mine where the adolescent goes to get the knowledge provided. In Montessori's view, the child is the precious gold nugget. It exists with all its beauty in tact and the adult is the gold prospector trained to focus on the nugget and remove all dirt and distractions that prohibit the precious rock to shine. (Montessori, 1997, p. 34)

Our purpose is to give the learner freedom to express themselves in their choice of work and foster the inner drive to learn. "No adult can get a child to manifest his deepest nature. A child can only manifest himself when a position of peace, freedom and non-interference has been established which is free from disturbance by the adult" (Montessori, 1997, p. 35). The sacred mystery is this--the prepared environment and the prepared adult are the real foundation of Montessori's Method. The mentors's attitude must always be one of love, recognizing the God-given potential existent in each child, supporting and following her as she constructs herself. For even the adult guide has no idea when the child will reveal herself, but the guide is always prepared, lest she be like the foolish virgins who let their lamps go out and missed the big event (Montessori, p. 33). "Multa debetur puero reverentia." In other words, much reverence is due to the child (Montessori, p. 45).

Fundamental Needs of the Adolescent

Montessori encapsulates the needs of the adolescent in two statements: a safe place to be grow and be guided through the hormonal and physical changes within them and an understanding of the world in which she will assume her active part (Montessori, 2007, p. 60). During the rapid physical change there is a need for physical work and expression that is balanced with intellectual challenges. This third plane is characterized by a state of expectation and a tendency towards creative work, which can manifest itself as language expression, i.e. poetry, story writing, research, song writing, drama, etc. or physical expressions showing the work of their hands, i.e. sculpture, wood working, design, etc. (Ewert-Krocker, 2012).

Adolescence is a turbulent time with strong emotions as well as creative tendencies. The adolescent lacks the social skills of distinguishing facial expressions and takes everything very personally. Another physical challenge within the adolescent is the unexpected decrease of her intellectual capacity. During this developmental period, dendrites are being formed and new neural pathways are rewiring. Due to this, we adults see the stereotypical indecisiveness of the individual, low motivational levels and disconnectedness (Ewert-Krocker, 2012).

During this age of doubt, discouragement and violent emotions, the adolescent needs to be provided a safe prepared environment where her voice is heard and appreciated, plus the opportunity to fortify her self-confidence in everything she does. This is termed valorization (Ewert-Krocker, 2012). Valorization pertains to the role that the adolescent will take as she continues to create her place in the universe. Valorization is the feeling of being valued because of what you do and being recognized for the contribution you have made in your society. There is a cycle of contribution that valorization follows (See Fig. 3). Valorization happens within the adolescent's social organization and that social organization regulates this developmental stage. Therefore, valorization needs to be in contact with the reality of the world so adolescents experience the fundamental mechanisms of society (Ewert-Krocker, 2012).

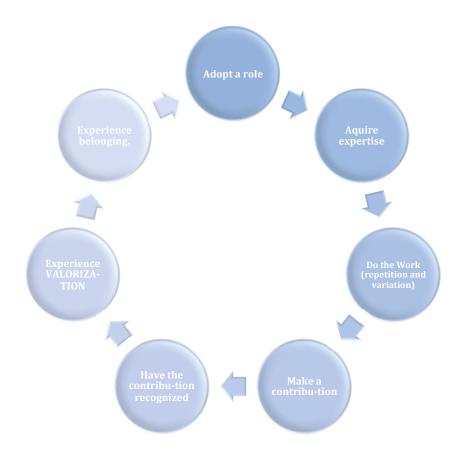


Figure 3. Cycle of Contribution. Adolescents, defined as ages 12-15, need to explore the social and economic world with purposeful work, and unique contributions, especially those that adults value. The cycle starts when the adolescent adopts a role. (Kahn, 2012)

Role of the Prepared Adult

This is the key difference in the Montessori Method compared to adolescent education: the prepared adult. This is not the same "preparedness" where the lesson plans are complete, the SWBATs (an acronym that stands for "students will be able to") are on the board and the informational input is ready to go. All of that preparation has the teacher at the center of the classroom. In Montessori's pedagogy, the prepared adult is part of the prepared environment. To provide a contextual reference for the requirements of the prepared adult, a description of what a prepared environment for adolescents looks like follows.

General guidelines for the adolescent's prepared environment are: care of self, care of others, and care of the prepared environment; it should be a "school of experience in the element of social life" (Ewert-Krocker, 2012). There are two pillars of the model found in Montessori's work *From Childhood to Adolescence* (2007): practical considerations for social organization and the education syllabus and methods (see appendix A).

Human beings construct themselves by interacting with, adapting to and changing their environment. "The human personality should be prepared for the unforeseen. . . should develop. . . the power of adapting itself quickly and easily. . . Adaptability—this is the most essential quality; for the progress of the world is continually opening new careers. . ."(Montessori, 2007, p. 61). Activities are chosen for their developmental value to this age group by observing the adolescents over time and responding to all aspects of human development, i.e. the whole child: physical, emotional, and spiritual.

Classroom materials are organized tasks that can be accomplished independently and successfully. They are "materialized abstractions" in that they provide concrete experiences of abstract concepts. For example, the abstract mathematical concept of the exchange of money for goods is materialized when adolescents run a small business. In each activity, the difficulties the adolescent may experience are isolated so the individual can focus on the element of challenge, one at a time with built-in controls of error. When the need arises to make change, the adolescent works through the math in a hands-on manner. The built in control is in the reconciling of the budget and moneybox as well as customer satisfaction. And as always, the materials and environment are aesthetically pleasing, inviting, and simple with implied dignity (Ewert-Krocker, 2012).

But since we also know that an overcomplicated environment with many incoherent stimuli hinders the child's mental task, we come to his aid by offering him images which are well-ordered and help him to achieve order. We teach the child by giving him a guide which meets his instinctive, needs and gives him a feeling of pleasure, because it helps him to perform satisfying work. We offer the child well-ordered stimuli with the *material* and thus do not teach directly, as is usually the case with young children, but rather by means of an order inherent in the material, and which the child can acquire on his own. We must prepare the whole environment, including all the material objects, to a degree that the child can perform every activity himself. . .Our material is not meant to be a substitute for the world and to impart knowledge of the world by itself, but is meant as a help and guide for the child's inner labour. We do not isolate the child from the world, but we give him the mental equipment with which to conquer the whole world and its culture. (Montessori, 1997, p. 27)

To continue the example of a small business, the business itself needs to please the eye, satisfy the customer, requires professionalism in regards to the staff. This small business is student owned, run, staffed, and consequently, the students spend the profits.

Design Considerations

To reiterate, "We do not isolate the child from the world, but we give him the mental equipment with which to conquer the whole world and its culture" (Montessori, 1997, p. 27). It's one thing to say it and mean it, and yet another thing to implement it successfully. I developed a prospectus that encapsulates our goals, purpose and philosophy. I patterned it after the prospectus in place at Hand In Hand Christian Montessori with additions and subtractions as needed regarding an adolescent program for ages 12-15. It starts with a mission statement, vision statement and value system.

Hand in Hand HIgH's Mission Statement

Hand In Hand HIgH Christian Montessori seeks to glorify God and honor the adolescent by teaching truth about God's Word and God's world as we prepare a cooperative, creative place to learn which incorporates Montessori principles with Christ at the the center to encourage our adolescents and their parents In other words, Hand In Hand HIgH seeks to glorify God by teaching truth about God's Word and God's world through a Christian Montessori model of cooperation and commitment to adolescents and parents.

Hand in Hand HIgH's Vision Statement

Hand in Hand HIgH desires to provide a prepared environment that engages the adolescent in self-expression in music, language and art for self-construction of the personality. We support the psychic development of the adolescent in biblical moral development, mathematics and language. The curriculum design prepares the adolescent for adult life by the exploration of science, human progress and civilization and occupations.

Hand in Hand HIgH's Value System

We believe adolescents have a calling from God for His Kingdom. He has placed his hand on them and blessed them, exhorted them in Scripture to let no one look down on them because they are young and encouraged them to set an example of Godly character. We believe true learning occurs when the adolescent's developmental needs are met and are given access to a prepared social environment and specialized prepared academic environment that allows them to perform meaningful work. We believe all life is better hand-in-hand, as parent to adolescent, parent to mentor, mentor to adolescent, adolescent to adolescent, parent to parent and all to God.

Continuing to set the framework for a successful Adolescent Montessori program in a non-farm setting includes developing a philosophy of education and defining goals for the program.

Hand in Hand HIgH believes that all people are created in the image and likeness of God with unique combinations of gifts, abilities, interests, learning styles and personalities. We believe we must incorporate Christ in all we do, as we old to that truth that God deeply loves all people and has a plan for each of our lives. (Jeremiah 29:11)

We believe adolescents are unique creations with inquisitive, creative, inspiring natural tendencies. They move through developmental stages, called sensitive periods, in which particular learning is at its' optimum level. Adolescence is in itself a sensitive period where adolescents are "social newborns" learning to navigate and negotiate within adult society (Ewert-Krocker, 2012).

For adolescents, education can be a joyful process when they have access to a prepared environment, prepared adults and developmentally appropriate materials that

meet the needs of the adolescent, consider the tendencies of the adolescent and selfcorrect. Students at our HIgH will continue to interact with qualified mentors and specialists who desire to engage the adolescents in purposeful work. We believe in creating a cooperative classroom that fosters respect, freedom with responsibility and independence.

Hand in Hand HIgH's Goals

Hand in Hand HIgH's goal is to provide adolescents with a Montessori classroom and residency experiences that approach education not as subjects that need to be covered but education as a cohesive whole, all subjects interrelated to one another. We believe adolescents are created uniquely by God (Psalm 139:14), have special gifts (Romans 12:6), and are called by God to be an example (1 Timothy 4:11). Our educational goal is to provide a positive, self-initiated learning environment that emphasizes God's unconditional love (Romans 8:38). We hope that this educational experience assists them in growing in holiness, valorizing of the personality, and preparing for a lifelong ministry to the greater glory of Christ and His kingdom for humankind.

Hand in Hand HIgH's final goal is to engage parents and their maturing children in authentic, purposeful and meaningful work. Our scope and sequence is designed to encourage and support the full development, normalization and valorization of the human being.

With this philosophy of education in place, our goals create a prepared social environment and physical environment where the students encounter and form a relationship with Jesus Christ. This means that we provide studies in apologetics, Bible and devotions to meet the developmental need of the adolescent in community and social justice. We provide time for individual and corporate prayer as well as time for meditation on the Word of God. We provide opportunities for adolescents to contribute to the community through charitable acts and service projects while living in honest community with one another practicing grace, mercy and forgiveness.

The second goal of this educational model is to prepare the social and physical environment to foster the unimpeded development of the adolescent and the whole personality. This means we continue to glean from Montessori's concepts and observations of adolescence including creating an environment for study and work as well as arranging the physical environment to meet the adolescent's developmental need for order. We create outdoor environments where the adolescent can fill the need for reflection and solitude as well.

In the same vein, we prepare the social environment among peers, staff and parents that honors the dignity and vulnerability of the adolescent and appreciate their role as "social newborns". The myth engrained into education today is that it is possible for one person to educate another. " . . . great teaching inspires students to educate themselves" (DeMille, 2009). We do this by having systems and methods in place to foster self-advocacy, peer mediation and provide adult education. For example, we give lessons in planner use, using the conflict wheel in peer mediation to the students as well as host a parent orientation meeting to inform them of the Montessori approach to adolescents. In the effort to surround the adolescents with prepared adults, we communicate to the adults in the student's sphere of influence of the role we play; we are to foster, be available and work side by side with the learner, removing ourselves from the center of the environment. "What is the greatest sign of success for a teacher thus transformed? It is to

be able to say, 'The children are now working as if I did not exist'" (Montessori, 1995). Lastly, we incorporate the Word of God throughout the social and physical environment to help the adolescent absorb the highest level of ethical practice and a Biblical worldview.

Within the third plane of development, a need for creative expression exists. It manifests itself in the adolescent as a state of expectation and a tendency to choose creative work, which in turn fulfills the need for a strengthening of self-confidence (Ewert-Krocker, 2012). The HIgH offers opportunities adolescents to develop their need of self-expression and aiding in their creation of self. We worship the Creator and not the created and express the beauty contained therein to share with others and for the glory of God. We explore expressing the inner self with music, movement, language and art. We practice cooperation with others, implementing grace, mercy and forgiveness to others and ourselves. We provide a physical education program allowing for choice and community work during this period of physical disequilibrium.

Another essential element in Montessori adolescent program design is the expansion of the traditional classroom. This means we include the world around us in order to best live out the interdependence of community, society and the world. Therefore, we tailor a base of work and study with the hands in concert with the development of the mind that is direct relation to the land and surrounding community. When we explore past and present civilizations we intentionally connect to the adolescent's sensitivity towards fairness, what is right and social justice with emphases on the potential for a bright future where they can make a difference. Keeping in line with our Biblical worldview, we recognize the grace and mercy of God throughout history as the work of salvation.

In order to support the natural tendencies of the adolescent and encourage exploration of the surrounding environment we use the specific study of moral education, mathematics and language. "The special province of morality is the relation between individuals, and it is the very basis of social life" (Montessori, 2008). We base our moral truth on the infallible and complete Word of God, guided by the Holy Spirit. We establish opportunities for community service, problem-solving involving real work and study. We connect to the land by growing some of our own food for our school lunch program. In response to the mathematical mind within each person, the course of study encompasses the development of real world skills that assist with logical reasoning, comparisons, exactness, order, and precision.

Community and society are based on the need to communicate with one another. Therefore, language skills will be nurtured to gain skills for proficient communication within society as well as the ability to gain appreciation for the multiple modes of communication based on cultural awareness.

Finally, we educate the adolescent in preparation for the adult life. This means that we study what it means to be truly human in the light of Christ through the lens of history and the integration of all the disciplines. We realize and appreciate how man, nature and supernature are interdependent and explore these relationships using the scientific disciplines. To clarify, Montessori defines "supernature" in *Education and Peace*:

Man then works with a true spirit of sacrifice and by his work transforms the environment, creating another world that pervades all of nature. This world is something more than nature, for to build it man uses everything that exists in nature. Man creates a super-nature. And man's super-nature is different from ordinary nature. (p. 97)

We also consider how man impacts nature and super-nature are through exploration of the development of machines and technology.

Preparation for adult life includes knowledge of economic independence. In this way, we use authentic means for the adolescent to live this out. In order to understand the aspects of economy, they own and run their own HIgHer Grounds Coffee Cart business. This micro-economy enables hands on experience of production and exchange, managing a budget and becoming ethical stewards of the process. A sense of responsibility develops during work that allows for freedom in following individual initiative in community with an economic society. This in turn develops a sense of valorization within real, adult-like, meaningful work where the individual's God-given strengths and talents contribute to the whole community.

Humanities and Montessori Syllabus for the Third Plane

Dr. Montessori laid out how the adolescent should be treated: as a vulnerable and growing human. She organized what should be taught at this age and the social structures needed to support the adolescent. Hand in Hand HIgH's Humanities curriculum is an interdisciplinary approach to the study of all aspects of the human experience, to include self-expression, mathematics and the sciences. Social studies, history, and language arts skills are intertwined into a study of the humanities. The HIgH is designed with a completely integrated curriculum. As we study the history of humankind every subject is aligned to that time period in every aspect possible. Using Montessori's syllabus for the Third Plane, as described in the Appendices of *From Childhood to Adolescence*, numerous

sub-disciplines within the Humanities curriculum are found in the three part Montessori plan:

- (1) Opportunities for Self-Expression
- (2) Education in Relation to Psychic Development
- (3) Education as Preparation for Adult Life.

Part 1: Opportunities for Self-Expression

The three subjects that fall under this part of the syllabus are Music, Language and Art. Keeping in mind that the HIgH program is completely interwoven as much as possible, music involves the study of the styles and periods of music, music history, music from different cultures (i.e. First Nations music, African tribal rhythms that formed the back bone of the Blues, Jazz and Rock and Roll), composing and performance of music. Practical application of this involves listening to composers, choral singing, and playing of instruments, in our case, the playing of hand chimes.

Language in this area of the scope and sequence fulfills the adolescent's need to process everything through dialogue and their need to be heard. Here the learners will practice public speaking, debate, Socratic seminars, acting, poetry, creative writing and play writing. This allows lessons in diction and elocution, making speeches and logically presenting their ideas (Montessori, 2007). In discussions and seminars, they practice grace and courtesy within a group setting, learning to tactfully agree to disagree and how to listen to other peer's input.

Art is a natural way to merge the emotional and intellectual being into an original and single expression of the adolescent self (Ewert-Krocker, 2012). Again, this subject is connected to the historical eras being studied. The students experience designing, sculpture, painting, drawing (starting with the seven elements of drawing), creative expression in mixed media as well as exploring the styles and periods of art. A deliberate demonstration we add is reproductions from nature because of the urban setting. All of this is not to be considered proper training in art but a means of giving expressions to individualistic feelings and the creation of self (Montessori, 2007).

Remembering the importance of movement and education in Montessori pedagogy, there is always a physical movement in every component of the adolescent's learning. This is also to compensate for the urban environment. In a farm setting, physicality is a given. In this environment, physicality needs to be programmed in because the third plane is a transformative time in their body. Adolescents desire physical challenge, especially risky challenges because they want to know their physical limits and potentials. They still like to play; it's a social activity and fills that developmental need (Ewert-Krocker, 2012).

Adolescents can be competitive and like to work towards individual accomplishments. The design of our programmed physical components, called pHIgH Ed, offers many different opportunities to explore ways to stay physically healthy through a personal health journal. The rotation of each pHIgH Ed subject is long enough to develop some proficiency and opportunity for organized competition and team building, but switches out often enough to keep interest and provide choice.

Part 2: Education in Relation to Psychic Development

The three elements in this part of the syllabus include moral education, mathematics, and language. Moral education covers developing a personal set or code of ethics, grace and courtesy and civility. The difficult fact is these cannot be taught; they must be experienced (Miller, 2012). Therefore, we create experiences where this can happen. HIgHer Grounds Coffee Cart (our Occupations program), by design, includes communication, decision-making, working with money and consequences for irresponsibility. When problems arise we implement the use of the conflict wheel.



Figure 4: The Conflict Wheel. Starting at the data circle, each one involved in the conflict, one at a time, goes through the entire wheel, ending with acknowledging and thanking those in the group for listening (Miller, 2012).

We hold community meetings at the end of each day called PACT. This stands for progress, acts of kindness, compliments and tomorrow. Progress allows for the HIgHer to share what progress they made during the day in their studies or activities during the day. Acts of kindness provide a platform for them to acknowledge in front of their peers, those peers who contributed positively to the community that day. Compliments lets HIgHers bless others work by recognizing them during this community meeting. The "tomorrow" section of our meeting assists the group in organizing and planning for the next day. In this way, the entire class comes together for closure of the day and a "materialized abstraction" of their whole community.

Grace and courtesy is an integral part of the Hand in Hand Christian Montessori culture. From Children's House, Montessori's classroom for ages three to five, all the way through the HIgH, the students receive lessons in table and conversation etiquette. Every year they host a tea party to formally practice what they are learning. One of the core values we have is referred to as the "3 D's" and the "3 R's". These embody freedom within boundaries. We intervene in any behavior that is dangerous, destructive or disruptive. We acknowledge behavior that is respectful, responsible and resourceful.

In addition to the core culture at Hand In Hand, the HIgH goes further in espousing the values of "Don't shame the name, His, yours or ours" and "Leave a place better than you found it." This brings our grace and courtesy further out into the social realm in which they exist and gives opportunity to make a positive change in their world.

Montessori, in Appendix B of *From Childhood to Adolescence*, relates that math education is of vital importance and thus ". . . the school must use special methods for teaching it and make clear and comprehensible its elements with the help of plenty of apparatus that demonstrates the 'materialized abstraction' of mathematics" (2007). In order to accomplish this we utilize the College Preparatory Math Curriculum, which establishes a balance between individual work and group work as well as mentor presentations and open work periods (Waski, 2012). It incorporates the use of materials

and small projects with application of their learning. Students' curriculum is individualized as much as is possible to reach them where they are and meet their needs.

The key to a successful math platform is to create a fun, safe and collaborative environment where they feel comfortable to make mistakes and learn at their own speed. Time is parsed out to get deep into the work and follow student interests. There is validation and appreciation given for different methods for finding answers. Math is seen as a process and fearless learning is engrained within every work (Waski, 2012). In direct opposition to traditional education, math is learned for a higher purpose rather for a test or a grade. By this open exchange of ideas, students learn from each other.(Waski, 2012). This aforementioned curriculum allows for all the needed elements.

Montessori considers language to be the psychic organ that leads to development of the personality (Montessori, 1995). Language assists communication, a human tendency, between peoples. It can create bonds, unite or divide. It is, perhaps, the greatest transmitter of human culture and identity (Englefried, 2012). The young adolescent has a need to communicate. They parallel the 18 month old in their restless expectation to verbally express themselves and with the ability to express their ideas and use language brings peace (Miller, 2012).

In support of these precepts, language in relation to Psychic Development includes journaling, creative and essay writing, and research papers. To further develop language skills, vocabulary, grammar and spelling are given attention within their work as needed. Once again, the language arts is mingled within the history eras where the literature selections, both fiction and non-fiction, are mirrored with the time era whenever possible. The development of an adolescent's personality comes through self-expression and can be facilitated by language. HIgHer's are encouraged to find his or her own unique voice in their writing.

Part 3: Education as Preparation for Adult Life

In this part of the syllabus, Dr. Montessori extends an invitation to adolescents: an invitation to get to know the natural planet they live on, come to know the culture of science and technology that you have inherited and working in your time. She says to the adolescents: come to understand how human beings have created this shared culture, how we have interacted, assimilated and united with one another to get to the place we are today. In essence, see that we are already interdependent and you (the adolescents) have a role to play. The focus is not on showing the creation of unity, but rather an awareness of the unity that already exists. This leads to more accountability and therefore, moral development (Ewert-Krocker, 2012).

The classifications of Montessori's three-part syllabus are: the study of earth and living things, the study of human progress and the study of the history of humankind (Montessori, 2007, p. 76-79). Within the study of earth and living things fall the subjects of geology, geography, biology, cosmology, botany, zoology, physiology, astronomy, and comparative anatomy (2007, p.76). The curriculum is spread over three years.

First year students discover life sciences: biology, botany and zoology. Second year students concentrate on earth sciences: geology, geography, astronomy, and cosmology. Third year learners focus on physical science to include physics and chemistry. By the end of the student's three years at the HIgH they will have covered all the categories listed in Dr. Montessori's study of earth and living things. The second category of this syllabus is the study of human progress and the building up of civilization. Here, physics, chemistry, mechanics, engineering and genetics are integrated into the history of science and technology, otherwise known as supernature. These topics are integrated into the HIgH curriculum mainly in the sciences. At the end of the second year, the student's produce and "Imaginary Planet" where they incorporate all their learning of the life sciences and earth sciences and "create" their own planet.

Mechanic, engineering and technology discoveries and inventions are included in the humanities' work at the HIgH. In American Heritage Studies, the students study the passage of time in decade intervals. For each decade, they research the ABC's of culture. Each letter stands for one aspect of culture: A=appearance, B=beliefs, etc. The letter "I" is designated for inventions and innovations. In this way they track and see what they inherited and entertain possibilities of what is to come.

The study of the history of humankind remains. Here again, scientific discoveries and geographical explorations are studied, but also the relation of humans to the environment, contact between different peoples, war, religion, patriotism, the present day and nation, law, government and civics. The study of these areas help to promote the awareness of the unity that already exists between people, experiences and environments.

The underlying approach to the implementation of these concepts is to understand them as a framework that contains a set of universal principles. We need to observe the adolescent scientifically and document what is being observed developmentally. Most importantly, consider what is possible in adolescence when we allow and provide feeding of their growth (Ewert-Krocker, 2012).

CHAPTER IV: DISCUSSION AND CONCLUSION

In summary, based on my review of the literature, the aspects of Montessori Adolescent Theory, which are essential to the design of a successful Montessori adolescent program in an urban setting are the same as those used within a farm environment. La Dottoressa's adolescent theory is sound in both environments. I found within an urban setting, great pains and energies need to be spent in providing every opportunity for the adolescent to work outdoors, and alongside adults in managing real life work that gives them a sense of valorization.

In designing a curriculum plan and preparing an environment for adolescents it is fundamental to work within the four planes of development and capitalizing on those "red hot" phases when interest and motivation are at its highest. This hearkens back to the Montessori mantra of "following the child," or in this case, the adolescent. When following the adolescent it is crucial to know, understand and design around the human needs and tendencies of the adolescent.

Within the needs and tendencies of the adolescent lies a multitude of opportunities to design a place and pedagogy of study that allows for creativity, physicality, risk, concentration and flow. Intentional planning of occasions where she may discover her larger place in life will aid her in her self-creation. Working alongside prepared adults who see the unlimited potential each one holds must be included in the design.

Prepared adults, called mentors, are most effective when they live genuinely. This means, they must be willing to make mistakes publically, modeling graceful failure and tenacity to try again. They must also practice self-reflection, self-awareness and self-observation in order to honestly walk alongside the adolescents.

Connection to the land, whenever possible, needs to be woven within the curriculum and the environment. School gardens, farm visits and outdoor projects that contribute their community or the larger community are valid ways of making that connection. It is important that adolescents see the entire circle of planting, growing, harvesting, preparing, eating, composting and planting again.

A clear mission and vision statement helps guide the design. Knowing and communicating your values and goals to your students and their parents and guardians provides clarity of expectations and allows a platform for discussion and inquiry between the students, parents and guardians, and the mentors.

Montessori provides a thorough outline for adolescent curriculum. It is malleable enough to be used in a variety of environments and also allows for regional and cultural expressions. Faith has always been a facet in the Montessori Method and continues to be pertinent today.

There are three sections of the adolescent curriculum: self-expression, psychic development and preparation for adult life. Each one has its place and needs to be executed with intentionality and care. One is not of more importance than any of the other two. There can be a tendency to skimp on the self-expression section when it comes to providing time for outdoor social recreation and time to be quiet and engaged in free thought.

The most critical skills for the adolescent to practice and see modeled by prepared adults are self-advocacy, self-awareness within a community and resourcefulness. Speaking up for herself, knowing and acting with respect and responsibility in a community and utilizing critical thinking skills equips her to be successful in her future endeavors. These skills will serve her well in any social or work situation she finds herself in.

Most of my discoveries on implementation, curriculum design, and lesson schedules are based on my experience. Unfortunately, there is a dearth in the literature in how to design and successfully deliver a Montessori adolescent program in a nonfarm setting. As such, many of my findings regarding design and application are based upon my nine years of blood, sweat and tears guiding this population, learning alongside them. Adolescents need to experience and practice real life alongside adult mentors, to know they make a real difference in their world, and to be immersed in a social context in which to learn.

Limitations of the Research

This research is limited in great part because of the short life of the Hand In Hand HIgH program. The first class was launched in September 2008 with a class of six students. We are now starting our ninth year in September 2017 with a class size of 21. There is a lack of follow up data regarding to success of students who go through the program. The difficulty of defining success is also a limitation.

Another limitation of this research is that the HIgH is not wholly and completely Montessori. We do not spend a majority of our time at a farm or have an unstructured schedule allotted with all the time the student needs. We are a private school and have to be aware of our customer base. At this time, there are limited Montessori high schools in the area. Most of our students go on to traditional educational institutions or return to homeschooling. Therefore, we would be irresponsible if we did not prepare our students to function well in their next venue. This means we take time to teach test-taking skills and expose them to grading systems and absolute deadlines.

Suggestions for Further Research

Many questions remain unanswered. Are there other factors that inhibit or promote a successful non-farm Montessori adolescent program? Does growing up in a Montessori education system better prepare students for success in our adolescent program? How much exposure is needed, if any, to learn well in a Montessori adolescent school? Where do Christian Montessori students end up in the world? Does anything change when the aspect of a biblical worldview and Christ centeredness is removed?

Is there a certain type of learner or a type of intelligence that lends itself towards success in a Montessori classroom? Is there one that fails to thrive in such an environment? In the same manner, how will integration of special needs learners impact the social structures and community cohesiveness that is so crucial during the adolescent developmental period?

This model is greatly dependent on the adult as part of the prepared environment. What are the credentials needed to be a successful adolescent mentor? What measures should be used? How would we objectify this process? What training is crucial in the recruiting of mentors?

Implications for Professional Application

Creating an urban Montessori adolescent program proved to be an ambitious task. It has been almost 10 years since the beginning. The program continues to evolve and change as we learn from the adolescents and dream of what can yet be. At the center of this program was the desire to create a safe and sacred space where the adolescent was honored, respected, nurtured and mentored in a Christlike manner: where the adult and adolescent worked side by side, learning and working together in a way that respects the individual as well as the developmental stage she is in. Adolescents need a safe place to practice real world skills such as work, self-regulation, collaboration, and diplomacy (Ewert-Krocker, 2012).

When designing such a program, the fundamental axiom of Dr. Montessori of "following the child" still applies to the adolescent. Observation is vital in order to meet the child where she is in her learning. Mentorship, where ". . .mentors and students meet face to face with the student, inspiring through the transfer of knowledge, the force of personality, and individual attention," is a non-negotiable element of any successful Montessori adolescent program (DeMille, 2009, p. 13).

The tenet of the student teaching herself is to be given credence. As DeMille writes in *A Thomas Jefferson Education*, "The student must be the primary educator because the student will only learn, *can* only learn, what he *chooses* to learn" (p. 70). This flows over into the characteristics needed for a successful adolescent mentor. The process of trying, failing and trying again to possibly succeed or fail needs to be modeled. Its absolutely necessary for the mentor to "totter around and look alarmed; run into difficulties and get worried" (DeMille, 2009, p. 70). We must be willing to fall down and cry, fail miserably and feel badly. But more importantly, we must start over again, all in the presence of the watching eyes of the adolescent (2009, p. 70). This is the sacrifice involved in being a mentor for this developmental age group. Genuine humanity must always be on display for her to consider, model and make her own in the creation of her self.

Conclusion

All my research and study about creating a Montessori early adolescent program without the aid of a farm has been focused on meeting the needs of adolescents, as identified by Dr. Maria Montessori, in the setting I had. It is my great delight to walk alongside adolescents and "do life together". The Lord laid adolescents on my heart and asked me to take them in during this time as "beautiful messes." I am so blessed because I said yes.

My passion is to equip these early adolescents, ages 12-15, with a safe place to learn how to navigate this new "social" realm they are thrust into; to practice failing, trying again, succeeding within a caring community; to help create and form their personality that truly exposes *whose* they are versus *who* they are. Hand in hand with this passion is my desire to train adult mentors who will take up the challenge to jump into the adolescent mess without judgment, preconceived notions and biases and wholeheartedly and humbly walk with the adolescent side by side.

Education is always reforming itself. From my point of view, it has sorely lacked attention to "following the child," hence my past 10 years of work and study. We are in the midst of following the test scores, following the reading proficiency scores, etc. We focus on the outcome without allowing time to consider the journey and what is learned on the way. We rush our children through crucial stages based on age and grade and not on where they may be developmentally. The hardest struggle I have experienced in the implementation of this design is the lack of willingness on the part of parents and the students themselves to ignore "age level" and "grade level" labels in order to give adolescents the time they need to develop. I will continue to "fight the good fight". I invite my fellow mentors, educators, guides and teachers to join me. I would welcome any discourse regarding the education of adolescents. I can be reached at r.lovette@hihcm.org. I leave you with this final quote from La Dotteressa.

Education should not limit itself to seeking new methods for a mostly arid transmission of knowledge: its aim must be to give the necessary aid to human development. This world, marvelous in its power, needs a "new man." It is therefore the life of man and his values that must be considered. If "the formation of man" becomes the basis of education, then the coordination of all schools from infancy to maturity, from nursery to university, arises as a first necessity: for man is a unity, an individuality that passes through interdependent phases of development. Each preceding phase prepares the one that follows, forms its base, nurtures the energies that urge towards the succeeding period of life. (Montessori, 2007, p. 84)

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Appendices

Appendix A: Hand In Hand HIgH Christian Montessori Prospectus

The Hand In Hand HIgH's curriculum was intentionally designed using Dr. Montessori's syllabus for the Third Plane, as described in the appendixes of From Childhood to Adolescence. A note on the Humanities: the Humanities curriculum is an interdisciplinary approach to the study of all aspects of the human experience. Social Studies, History, and Language Art skills are intertwined and aligned chronologically, to the maximum extent possible, into a study of the Humanities. Appendix A: Hand In Hand HIgH Scope and Sequence

Part 1: Opportunities for Self-Expression

Music*:

Styles and periods of music, music history, music of different cultures, music composition, playing of musical instruments, music performance

Language*:

Development of language, journaling, creative writing, essay writing, research papers, vocabulary, grammar, spelling,

Art*:

Styles and periods of art, seven elements of drawing, designing, sculpture, painting, and creative expression

Part 2: Education in Relation to Psychic Development

Moral Education:

Biblical worldview, apologetics, current events, missions and outreach, self-reflection

Mathematics:

Applications for the mathematical mind, seminar, cohort and cooperative learning, practice in Foundations, Pre-Algebra, Algebra, Geometry, and Logic

Language*:

Public speaking, acting, debate, discussion, Socratic seminars, drama, poetry, creative writing and playwriting, literature and exposure to various types of genres

Part 3: Education as Preparation to Adult Life

The Study of Earth and Living Things:*

Intelligent design and evolution, Physical Science, Geography, Botany, Zoology, and Biology, to include a Farm Stay in order to experience these disciplines in an authentic environment

The Study of Human Progress and the Building Up of Civilization*:

History of human achievements, discoveries, inventions; history of the genesis of civilization to modern day

The Study of the History of Mankind*:

Where does history begin? Seminar, early civilizations and their culture, societies in transition, the age of science and ideas, current events

*When applicable and feasible, these subjects are aligned with the time period studied.

Appendix B: Curriculum Design for the Three-Year Cycle

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Physical Education	S.H.A.P.E. Inventory, hygiene, soccer, field hockey	Kinds of Smart inventory, basketball, hockey	Sledding, snow tubing, skating, bowling options	Leadership style inventory, volleyball,	Personality color inventory, badminton, tennis, track and field	Farm activities and chores, outdoor games
Language (Integrated throughout plan of work & study)	Read/write Folklore story, journaling, seminars, quiet time, free write	Essay composition, MLA format	Poetry, Technical Writing	Riddle Poetry, I am from poetry	Civil War Scrapbook	Observational nature writing
Art & Art Appreciation	Focus: Watercolor Painting Anglo Saxon, Romanesque, Duccio, Giotto, Van Eyck, Bottocelli, Exploration of 7 elements of art	Focus: Watercolor Painting Da Vinci, Rembrandt, Michelangelo, Vermeer, Gainsboro, Exploration of 7 elements of art	Self-Study, Free expression	Focus: Watercolor Painting Canaletto, Stubbs, Blake, Toulouse- Latrec, Morisot, Exploration of 7 elements of art	Focus: Watercolor Painting Degas, Cezanne, Seurat, Van Gogh, Cassat, Klimt, Exploration of the 7 elements of art	Art in and from Nature
Music & Music Appreciation	Focus: Solfege, basic song structure, reading music, worship team Hildegard Von Bingen, Léonin, Péonin,	Focus: Handchimes, reading music, Christmas chapel Josquin des Prez, William Byrd, Claudio Monteverdi,	Focus: song writing PDQ Bach	Focus: Composition, worship team, J. S. Bach, Vivaldi, Handel	Focus: Handchimes, reading music, Closing Chapel Hayden, Mozart, J.C. Bach	Performance at Banquet of Blessing (end of year banquet)
Drama			Elements of Drama, Drama Games, Costume, Set, and Makeup Design			Performance of one act play at Banquet of Blessing

YEAR 1: SELF-EXPRESSION

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Moral Development	Biblical worldview, Bible memory, devotions, community identity, class retreat, chapel	Biblical worldview, Bible memory, devotions, community identity, Fall farm stay chapel	Biblical worldview, Bible memory, devotions, community identity, Winter Wipeout, chapel	Biblical worldview, Bible memory, devotions, community identity, Valentine's Day Tea, chapel	Biblical worldview, Bible memory, devotions, community identity, Land school stay, chapel	Biblical worldview, Bible memory, devotions, community identity, Spring farm stay, chapel
Math	Foundations or Pre- Algebra	Foundations or Pre- Algebra	Applied Math	Foundations or Pre-Algebra	Foundations or Pre- Algebra	Occupational Math
Language	<i>Beowulf</i> , Grammar rules, vocabulary, sentence analysis,	Carry on Mr. Bowditch Day of Tears	Day of Tears	Across Five Aprils	The Arrival	Portfolio Preparation

YEAR 1: PSYCHIC FORMATION

YEAR 1: PREPARATION FOR ADULT LIFE

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Study of Earth and Living Things	Life Science	Life Science	Environmental Science	Life Science	Life Science	Farm Science
Study of human progress and the building of civilization	Era of Exploration	First Settlements	Path to the Revolutionary War	Oregon Trail, Gold Rush, Industrialization	Immigration, Reform Movements	Science Project
Study of the history of humankind	Oral Tradition, Norse Voyages	Study of the Colonies	Founding and Growth of a Nation	Westward Expansion	1900s, 1910s,	Portfolio Preparation

YEAR 2: SELF-EXPRESSION

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Physical Education	S.H.A.P.E. Inventory, hygiene, soccer, field hockey	Kinds of Smart inventory, basketball, hockey	Sledding, snow tubing, skating, bowling options	Leadership style inventory, volleyball,	Personality color inventory, badminton, tennis	Farm activities and chores, outdoor games
Language (Integrated throughout plan of work & study)	Riddle poetry, Zeno poetry, I am From poetry	Essay composition, MLA format	Poetry, Technical Writing	Write early American literature anthology	Write early American literature anthology	Observational nature writing
Art & Art Appreciation	Focus: Mixed Media Painting, Pottery Grandma Moses, Whistler, Dali	Focus: Mixed Media Painting, Pottery Matisse, Cassandre, (1901)Kahlo, Dorthea Lange	Independent Art Exploration	Focus: Mixed Media Painting, Pottery Lichtenstein, Magritte, Lowry,	Focus: Mixed Media Painting, Pottery Picasso, Pollack, Johns	Art from and in Nature
Music & Music Appreciation	Focus: Solfege, basic song structure, reading music, worship team Beethoven, Mendelsohn, Chopin,	Focus: Handchimes, reading music, Christmas chapel Lizst, Bizet, Tchaikovsky	Focus: Swing music and dance	Focus: Composition, worship team Rachmaninov, Gerswin, Copeland	Focus: Performance American Folk songs, Jazz, Blues, Rock/Pop/ Country	Performance at Banquet of Blessing (end of year banquet)
Drama			Elements of Drama, Drama Games, Costume, Set, and Makeup Design			Performance of one act play at Banquet of Blessing

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Moral Development	Biblical worldview, Bible memory, devotions, community identity, class retreat, chapel	Biblical worldview, Bible memory, devotions, community identity, Fall farm stay chapel	Biblical worldview, Bible memory, devotions, community identity, Winter Wipeout, chapel	Biblical worldview, Bible memory, devotions, community identity, Valentine's Day Tea, chapel	Biblical worldview, Bible memory, devotions, community identity, Land school stay, chapel	Biblical worldview, Bible memory, devotions, community identity, Spring farm stay, chapel
Math	Pre-algebra or Algebra & Inductive Logic	Pre-algebra or Algebra & Inductive Logic	Applied Math	Pre-algebra or Algebra & Inductive Logic	Pre-algebra or Algebra & Inductive Logic	Occupational Math
Language (Integrated throughout plan of work & study)	Gothic Literature Read <i>Frankenstein</i>	Frankenstein Al Capone	Choice Book	Out of the Dust/No Promises in the Wind Diary of Anne Frank	Code Talkers The Outsiders	Portfolio Preparation

YEAR 2: PSYCHIC FORMATION

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Study of Earth and Living Things	Earth Science	Earth Science	Environmental Science	Earth Science	Earth Science	Farm Science
Study of human progress and the building of civilization	Reform Movements	Alliances, Preservation of Natural Resources	Jazz Age	Great Depression Dust bowl, Farming technology Holocaust	Space Race Technology: micro- processors, calculators, video games	Science Project
Study of the history of humankind	Reuniting of our nation	Theodore Roosevelt WW I	1920s	1930s, 1940s	1950s 1960s	Portfolio Preparation

YEAR 2: PREPARATION FOR ADULT LIFE

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Physical Education	S.H.A.P.E. Inventory, hygiene, soccer, field hockey	Kinds of Smart inventory, basketball, hockey	Sledding, snow tubing, skating, bowling options	Leadership style inventory, volleyball,	Personality color inventory, badminton, tennis	Farm activities and chores, outdoor games
Language (Integrated throughout plan of work & study)	Personal Memoir ASL 1	Essay Composition, MLA Format, ASL 1	Poetry ASL 1	Short Story Writing, ASL 2	Speech ASL 2	Observational nature writing
Art & Art Appreciation	Focus: Drawing- Colored Pencils Warhol, Ansel Adams	Focus: Drawing- Colored Pencils Photography	Independent Art Exploration	Focus: Drawing- Colored Pencils Modern Art, Sculpture Garden	Focus: Drawing- Colored Pencils MIA modern art exhibit	Art from and in nature
Music & Music Appreciation	Focus: Solfege, basic song structure, reading music, worship team Gershwin 1960s-1980s	Focus: Handchimes, reading music, Christmas chapel 1990s-2010s	Focus: Alternative Musical Instruments/ Performance	Modern/Avant Guard Music	Modern/Avant Guard Music	Performance at Banquet of Blessing (end of year banquet)
Drama			Elements of Drama, Drama Games, Costume, Set, and Makeup Design			Performance of one act play at Banquet of Blessing

YEAR 3: SELF-EXPRESSION

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Moral Development	Biblical worldview, Bible memory, leading devotions, community identity, class retreat, chapel	Biblical worldview, Bible memory, Fall farm stay, leading devotions	Biblical worldview, Bible memory, Winter Wipeout, leading devotions	Biblical worldview, Bible memory, Valentine's Day tea, leading devotions	Biblical worldview, Bible memory, Capstone trips, leading devotions	Biblical worldview, Bible memory, Spring fall stay, leading devotions
Math	Algebra or Geometry, Deductive Logic	Algebra or Geometry, Deductive Logic	Algebra or Geometry, Deductive Logic	Algebra or Geometry, Deductive Logic	Algebra or Geometry, Deductive Logic	Portfolio Preparation
Language	Watson's Go to Birmingham	American Short Stories	Choice Book	The Scarlet Letter	Animal Farm	Portfolio Preparation

YEAR 3: PSYCHIC FORMATION

YEAR 3: PREPARATION FOR ADULT LIFE

Subject	Quarter 1	Quarter 2	J-Term	Quarter 3	Quarter 4	May Term
Study of Earth and Living Things	Physical Science,	Physical Science	Physical Science	Physical Science	Physical Science	Farm Science
Study of human progress and the building of civilization	Space Race Technology Boom: personal computers Roe v. Wade	Electronic Age: mobile phones, SMS, World Wide Web Societal Lag	Seminar: technological advances and unintended consequences	Current Events, Debate, Seminar	Current Events, Debate, Seminar	Science Project
Study of the history of humankind	1960s, 1970s, 1980's	1990s, 2000s, 2010s	Constitutional Studies	Constitutional Studies/Civics	Civics	Washington, D. C. Presentation

Lexicon of Montessori Terms

Absorbent Mind

Is the hidden, physic energy of the child in the first plane of development; active, although with a tendency to be overlooked in its importance in traditional education. It is the unconscious drive and/or effort to live, to learn, to improve. The mind of the infant has infinite power to deeply absorb his surroundings leaving traces called *engrams*. Located in the subconscious or *Mneme*, it remembers everything. It is important to note that these experiences are not "remembered," they transform the child and fashion his humanity. These engrams power the intellect more than the conscious memory. *Horme* is the unconscious drive or effort to live, learn and improve. The self-construction of the child can only be done by the child himself actively engaging with his environment.

"The things he sees are not just remembered; they form part of his soul. He incarnates in himself all in the world about him that his eyes see and his ears hear. In us the same things produce no change, but the child is transformed by them."—Dr. Maria Montessori, The Absorbent Mind, p. 62 "All experiences through which and individual passes in life are retained in the mneme, not only the infinitesimal part that enters the consciousness."—Dr. Maria Montessori, To Educate the Human Potential, p. 13. "It follows that at the beginning of his life the individual can accomplish wonders—without effort and quite unconsciously."—Dr. Maria Montessori, The Absorbent Mind, p. 59.

"Yet there exists in this inert being a global power, a "human creative essence," which drives him to form a man of his time..."—Dr. Maria Montessori, *The Absorbent Mind*, p. 58.

"Already we have found it reasonable to suppose that the child, at birth, bears within him constructive possibilities, which must unfold by activity in his environment."—Dr. Maria Montessori, The Absorbent Mind, p. 57. "...that the organs become shaped in accordance with the creature's cycle of behavior in its environment."—Dr. Maria Montessori, The Absorbent Mind, p. 53

"Just as there is no complete man already formed in the original germinative cell, so there seems to be no kind of mental personality already formed in the newborn child."—Dr, Maria Montessori, *The Absorbent Mind*, p. 51.

Adaptation

Closely linked to the Absorbent Mind; most active within the first period of the child's life. It is because of his absorbent mind that he has the power to adapt to his life as he experiences his environment. In the older child, it is considered to be the practical ability to face the difficulties in life. It is what the soul-less animal lacks: a cat's meow is the same whether it is in India or Canada, however, the child born into the Indian or Canadian culture will speak what his parent's speak, observe the cultural and societal mores of his environment: this is the core of adaptation.

"There is in the child a special kind of sensitivity which leads him to absorb everything about him, and it is this work of observing and absorbing that alone enables him to adapt childhood."—Dr. Maria Montessori, *The Absorbent Mind*, p. 62.

"Nothing has more importance for us than this absorbent form of mind, which shapes the adult and adapts him to any kind of social order, climate or country."—Dr. Maria Montessori, *The Absorbent Mind*, p. 63.

"This shows that the true function of infancy, in the ontogenesis of man, is an adaptive one; to construct a model of behavior, which renders him free to act in the world about him and to influence it."—Dr. Maria Montessori, *The Absorbent Mind*, p. 66

"The vital task of infancy is this work of adaptation, which takes the place of the hereditary "behavior patterns" present in animal embryos. "—Dr. Maria Montessori, *The Absorbent Mind*, p. 71.

"...he must also have practical ability in order to face the difficulties of life. *Adaptability*—this is the most essential quality..." Dr. Maria Montessori, *From Childhood to Adolescence*, p. 61.

Cosmic Education

Education emphasizing the interconnectedness of the universe, from the tiniest atom to the largest entity. The goal of cosmic education is to give the child an understanding that they themselves are a part of this grand

universal whole. It uses the special powers of imagination and reason at this age with Great stories and lessons, aids the acquisition of culture. It asks the question of the cosmic task: "What role will I play in this cosmic scheme?"

"Since it has been seen to be necessary to give so much to the child, let us give him a vision of the whole universe. The universe is an imposing reality, and an answer to all questions. We shall walk together on this path of life, for all things are part of the universe, and are connected with each other to form one whole unity. This idea helps the mind of the child to become fixed, to stop wandering in an aimless quest for knowledge. He is satisfied, having found the universal centre of himself with all things."— Dr. Maria Montessori, To Educate the Human Potential, p. 6.

Discipline

Through the prepared environment, designed around the child's sensitivities and tendencies, outward discipline is surrounding the child, without imposing the adult's biases upon him, and over time, inward discipline is developed through freedom of movement within the prepared environment.

"It is clear therefore that the discipline which reveals itself in the Montessori class is something which comes more from within than without. But this self-discipline has not come into existence in a day, or a week, or even a month. It is the result of a long inner growth, an achievement won through months of training."—E. M. Standing, Maria_Montessori—Her Life and Work, p. 198-99.

"This discipline is one of the fruits of liberty. In fact we might say that such discipline and liberty cannot really be separated: they are like the opposite sides of the same coin." —E. M. Standing, *Maria Montessori*— *Her Life and Work*, p. 178.

"Discipline in freedom seemed to solve a problem which had hitherto seemed insoluble. The answer lay in obtaining discipline by giving freedom. These children, who sought their work in freedom, each absorbed in a different kind of task, yet all belonging to the same group, gave and impression of perfect discipline."—Dr. Maria Montessori, *The Absorbent Mind*, p. 202.

"Being active with one's own hands, having a determined practical aim to reach, is what really gives inner discipline."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 86.

Erdkinder

German for "earth-children"; a prepared environment for the adolescent that mirrors society; a microcosm that continues to teach the young adult about civilization through its beginnings in farming; Montessori saw the Erdkinder environment filled with ample opportunities for study of science, math, economics. It extends the safe working environment with real world opportunities for valuable work and in preparation/ practice for his role in society. "The Erdkinder is yet another illustration of how Montessori education attempts to break down the barriers that typically separate school from "real life" contexts.—Angeline Stoll Lillard, *Montessori: The Science Behind the Genius*, p. 254.

"Therefore work on the land is an introduction both to nature and to civilization and gives a limitless field for scientific and historic studies."— Dr. Maria Montessori, *From Childhood to Adolescence*, p. 68.

"...while this is the time, the "sensitive period" when there should develop the most noble characteristics that would prepare a man to be social, that is to say, a sense of justice and a sense of personal diginity."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 62.

Freedom

It goes hand in hand with responsibility; freedom for choice within the good.

"On this question of liberty'—Dr. Montessori warns us—'we must not be frightened if we find ourselves coming up against certain contradictions at every step. You must not imagine that liberty is something without rule or law.' "—E. M. Standing, *Maria Montessori: Her Life and Work*, p. 286.

"Freedom is the key to the entire process and the first step comes when the individual is capable of acting without help from others and become aware of himself as an autonomous being."—Linda Davis, NAMTA 31:1, 2006.

"When we say the child's freedom must be complete, that his independence and normal functioning must be guaranteed by society, we are not using the language of vague idealism. These are truths revealed by positive observations made upon life and nature. Only through freedom and environmental experience is it practically possible for human development to occur."—Dr. Maria Montessori, *The Absorbent Mind*, p. 90-91.

Grace and Courtesy

Intrinsic sensitivity in the child related to order. Requires a discovery of personal dignity; The ability to show hospitality, consider others and an intentional skill of minding his movements; Basically the presentation, and practice/repetition of the culture's social graces so as to be prepared in life; to be intertwined with practical life exercises; feeds the skill of adaptability.

"...Teach teaching, not correcting."-Dr. Maria Montessori as quoted in E. M. Standing, *Maria Montessori: Her Life and Work*, p. 219. "One thing," says Montessori, "we should remember. It is never a danger to teach. You ask, 'Am I to teach him or not?' I say, "Teach him, teach him."" The problem is not in the act of teaching but in the child's learning. Maybe he has understood; maybe not. Not matter if he does it wrong—do not correct him or he will retire into his shell. We must not insist if he makes mistakes. We have taught and we have failed. Leave it at that and turn to someone else." –E. M. Standing, *Maria Montessori: Her Life and Work*, p. 220.

"We do not mean, of course, that the directress should attempt to explain all this to the children in so many words. What she should do is to go through the whole action herself, indicating as she does so, by her actions, the main subdivisions into which is tis broken up."—E. M. Standing, *Maria Montessori: Her Life and Work*, p. 223.

"But the acts of courtesy which he has been taught with a view to his making contacts with others must now be brought to a new level...we begin the introduction of moral relationships, of those that awaken the conscience."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 7.

"No teacher obliges him to enter into the society; but if he wishes to be a member ne must freely choose to obey its principles if he wishes to take part. The fact that he finds himself thus united with other individuals who have freely accepted the principles of a society constitutes the attraction of that society. Its limits are no longer the walls of a room but only the restraints of a moral order."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 8.

Hand/Head

Refers to Dr. Montessori's observation of the child using the hand as the conduit for constructing his intelligence;

"The human hand, so delicate and so complicated, not only allows the mind to reveal itself but it enables the whole being to enter into special relationships with its environment. We might even say that man 'takes possession of his environment with his hands.' His hands under the guidance of his intellect transform this environment and thus enable him to fulfill his mission in the world."—Dr. Maria Montessori, *Maria Montessori: The Secret of Childhood*, p. 81.

"The skill of man's hand is bound up with the development of his mind, and in the light of history we see it connected with the development of civilization."—Dr. Maria Montessori, *The Absorbent Mind*, p. 150. "We may put it like this: the child's intelligence can develop to a certain level without the help of his hand. But if it develops with his hand, then the level it reaches is higher, and the child's character is stronger."—Dr. Maria Montessori, *The Absorbent Mind*, p. 152.

"The hand has now become the instrument of the brain; and it is through the activity of his hands that he enriches his experience, and develops himself at the same time."—Dr. Maria Montessori—*The Absorbent Mind*, p. 112.

"Men with hands and no head, and men with head and no hands are equally out of place in the modern community."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 60. "The child must always be given work to do with his hands as he works with his mind, for the child's personality has a functional unity."—Dr. Maria Montessori, *Education for Peace*, p. 80.

"It is not a good thing to cut life in two, using the limbs for games and the head for books. Life should be a single whole, especially in the earliest years, when the child is forming himself in accordance with the laws of his growth."—Dr. Maria Montessori, *The Adolescent Mind*, p. 164.

Human Development

The growth physically, emotionally, cognitively, spiritually that follows universal tendencies and thrives when allowed to follow the sensitivities naturally found within the child; explicitly detailed in her 4 planes of development. (See above entry)

"Surely it is this very grand view of development—this understanding of the cyclical and non-repeatable nature of 'the seasons of developing life" – that constitutes one of the great distinguishing features of Montessori's work.—Grazzini, "The Four Planes of Development," p. 28. "It follows that the child's character develops in accordance with the obstacles he has encountered or the freedom favoring his development that he has enjoyed."—Dr. Maria Montessori, *The Absorbent Mind*, p. 195. "There are natural laws which guide growth and formation, and the individual *must* follow these laws if he is to build up his character, his inner self."—Dr. Maria Montessori, *The Absorbent Mind*, p. 218.

Human Potential

Montessori's belief in the ability of the child to become the savior of mankind; bringing peace upon the planet as an effect of remaining true to the innate development sensitivities and tendencies already present within the child. The "following the child" in the absence of adult agendas has the potential to create a new society.

"Growth and psychic development are therefore guided by: the absorbent mind, the nebulae and the sensitive periods, with their respective mechanisms. It is these that are hereditary and characteristic of the human species. But the promise they hold can only be fulfilled through the experience of free activity conducted on the environment."—Dr. Maria Montessori, *The Absorbent Mind*, p. 96.

"Let us in education always call attention of children to the hosts of men and women who are hidden from the light of fame, so kindling a love of humanity; not the vague and anaemic sentiment preached today as brotherhood, nor the political sentiment preached today as brotherhood, nor the political sentiment that the working classes should be redeemed and uplifted."—Dr. Maria Montessori, *To Educate the Human Potential*, p. 18. "To present detached notions is to bring confusion. We need to determine the bonds that exist between them. When the correlation among the notions, by now linked one to the other, has been established, the details may be found to tie together among themselves. The mind, then, is satisfied and the desire to go on with research is born. Then, by determining the correlation between things with the child, and thereby obeying an essential impulse of the human mind, we create a philosophy for him. And why may not the child philosophize?"—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 58.

Human Tendencies

Specific behavior patterns innate in all of us, no matter our geography, culture, or heritage. They are natural laws that lead us to respond to environmental factors and/or stimuli in a specific way. Beyond the basic instincts of animals, human beings have tendencies, which, while helping to ensure survival, also bring gratification in our living. It derives its drive from the human spirit. The tendencies are: exploration, orientation, order, communication, to know and reason, abstraction, imagination, mathematical mind, work, repetition, exactness, activity (full body), manipulation (directly with the hand), self-perfection.

"There is—so to speak—in every child a painstaking teacher, so skillful that he obtains identical results in all children in all parts of the world."— Dr. Maria Montessori, *The Absorbent Mind*, p. 6.

"...tendencies do not change and human tendencies are hereditary."— Mario M. Montessori, "The Human Tendencies and Montessori Education," p. 16.

"Because Dr. Montessori stresses the need to serve those special traits that have proved to be the tendencies of Man throughout history."—Mario M. Montessori, "The Human Tendencies and Montessori Education," p. 25.

Imagination

Defined as the ability to look beyond and form new ideas about things *based in reality*. This is connected and special to the child in the second plane (6-12 year old). Montessori made a great distinction between imagination and fantasy. Fantasy is not based in reality and she observed children choosing reality over fantasy.

"These two powers of the mind (imagination and abstraction), which go beyond the simple perception of things actually present, play a mutual part in the construction of the mind's content....we see that the starting point was always something orderly and exact in their minds, and that this was what enabled them to create something new."—Dr. Maria Montessori, *The Absorbent Mind*, p. 185.

"Imaginative creation has no mere vague sensory support; that is to say, it is not the unbridled divagation of the fancy among images of light and colour [sic], sounds and impressions; but it is a construction firmly allied to reality; *and the more it holds fast to the forms of the external* created world, the loftier will the value of its internal creations be. Even in imagining an unreal and superhuman world the imagination must be contained within the limits which recall those of reality. Man creates, but on the model of that divine creation in which he is materially and spiritually immersed. (Advanced Montessori Method, Vol. I, pg. 248.)—E. M. Standing, *Maria Montessori: Her Life and Work*, p. 339. "The best way we can help the child to develop his imagination, then is to put him in relation with an environment so prepared that he can lay up a store of accurate images by means of his spontaneous observation in it." E. M. Standing, *Maria Montessori: Her Life and Work*, p. 341.

Independence

The child works through the four planes of development, they continue to seek independence; the focus is on "Help me to do it myself." "So man develops by stages, and the freedom he enjoys comes from these steps towards independence taken in turn. It is not just a case of deciding to "set him free," or of wanting him to be free; his independence is a physiological state, a change wrought by the processes of growth. Truly it is nature which affords the child the opportunity to grow; it is nature which bestows independence upon him and guides him to success in achieving his freedom."—Dr. Maria Montessori, *The Absorbent Mind*, p. 86.

"Independence is not a static condition; it is a continuous conquest, and in order to reach not only freedom, but also strength, and the perfection of one's powers, it is necessary to follow this path of unremitting toil."—Dr. Maria Montessori, *The Absorbent Mind*, p. 90.

"The child, who was born normally and is growing normally, goes towards independence."—Dr. Maria Montessori, *The Absorbent Mind*, p. 92. "The whole aim of the Montessori system can be summed up as the 'valorization of personality' at each stage. This involves, amongst other things, that the child should acquire as much independence as is possible for him to acquire at each stage of development."—E.M. Standing, Maria Montessori: Her Life and Work, p. 177.

Materialized Abstractions

Are materials that embody the abstract qualities of a concept. For example, when a child is introduced to the red rods they are given the sensorial experience of length. They experience by touch and then with language. The language used is exact to encourage the child to think freely and to be able to apply concepts universally in any environment they encounter. They are designed for the child's mathematical mind to perceive order and precision in the prepared environment, which can be lacking in natural environment.

"Articles of mathematical precision do not occur in the little child's ordinary environment. Nature provides him with trees, flowers and animals, but not with these. Hence the child's mathematical tendencies may suffer from lack of opportunity, with detriment to his later progress. Therefore, we think of our sensorial material as a system of materialized abstractions, or of basic mathematics."—Dr. Maria Montessori, The Absorbent Mind, p. 186.

"The same thing happens, as we have seen, with the other sensorial materials: they become "Keys to the Universe" revealing to the children a new and deeper kind of knowledge about the objects seen in the outside world."—E. M. Standing, Maria Montessori: Her Life and Work, p. 165.

Mathematical Mind

A term Montessori borrowed from Pascal; Is the natural state of the human mind; with proclivities towards order, precision, exactness and categorizing. This is inborn in all children and is observable when the child is working in his environment. In fact, as a lesson is given, the more precise and orderly the teacher is with the lesson it seems the more apt the child is to give all his energies toward it.

"That the mathematical mind is active from the first, becomes apparent not only (as we have hinted) from the attraction that exactitude exerts on every action the child performs, but we see it also in the fact that the little child's need for order is one of the most powerful incentives to dominate his early life."—Dr. Montessori, *The Absorbent Mind*, p. 190.

"Order and precision, we found, were the keys to spontaneous work in school."—Dr. Maria Montessori, The Absorbent Mind, p. 186.

"The results obtained are surprising, for the children have shown a love of work which no one suspected to be in them, and a calm and an orderliness in their movements which, surpassing the limits of correctness have entered into those of "grace"."—Dr. Maria Montessori, Dr. Montessori's Own Handbook, p. 183.

Maximum Effort

An innate tendency observed by Montessori where children seemed to enjoy difficult work in which they can concentrate and try their hardest. They glory in giving their absolute best and reaching a vigorous goal. "A child does not follow the law of minimum effort, but rather the very opposite. He consumes a great deal of energy in working for no ulterior end, and employs all his potentialities in the execution of each detail."— Dr. Maria Montessori, *The Secret of Childhood*, p. 196.

"To bring about this effort the end to be reached must not be too far off or too difficult: on the other hand it must not be too easy. It must be within, measurable distance—"just out of reach, but coming within reach by a 'stretching of the mind'!"—E. M. Standing, *Maria Montessori: Her Life and Work*, p. 234.

"As a matter of fact those who have had most experience with regard to the work undertaken by "free children" know best that they prefer difficult work—something that they can get their teeth into, intellectually speaking. Nothing bores a child more quickly than having to work at something he finds too easy."—E. M. Standing, *Maria Montessori: Her Life and Work*, p. 295.

Mixed Age Group

The benefits of a multi-aged group are the mutual helpfulness between them. It is based on the ages of the planes of development and because the lessons are given individually there is opportunity for cooperation versus competition.

"The older and more advanced show a keen interest in the progress of the younger and more backward; and it is often quite touching to observe the way in which the former regard the triumphs of the latter with as much joy as if they had been their own achievements." ."—E. M. Standing, Maria Montessori: Her Life and Work, p. 177.

"To segregate by age is one of the cruelest and most inhuman things one can do, and this is equally true for children. It breaks the bonds of social life, deprives it of nourishment This is a fundamental mistake, which breeds a host of evils. It is an artificial isolation and impedes the development of the social sense."—Dr. Maria Montessori, *The Absorbent Mind*, p. 226.

"All the older ones become heroes and teachers, and the tinies [sic] are their admirers."-- Dr. Maria Montessori, *The Absorbent Mind*, p. 226.

Moral Development

The creation of a moral adult; the potential is in every child. This is where the hope of all mankind lives. Based on the fact that morality is a choice, and it begins in the Plane 1 child: responsibility for self and personal belongings, speaking respectfully to his peers and adults; but continues throughout the planes. The second plane child focuses on right and wrong, what is fair and just in conceptual terms and shows a first desire to make a difference. In the third plane, the young adult is geared towards the social impact of justice; what is fair to their peers. It is in the fourth plane when independent actions to ensure right and wrong, fair and just manifest. Whatever the case may be, the classroom must serve the development of the moral child for the choices he makes as a man will undoubtedly be constructed from all the moral choices he has previously made: education for a peace-filled life.

"Moral education is the source of that spiritual equilibrium on which everything else depends and which may be compared to the physical equilibrium or sense of balance without which it is impossible to stand upright or to move into any other position."—Dr. Maria Montessori—*From Childhood to Adolescence*, p. 76.

"The special province of morality is the relation between individuals, and it is the very basis of social life. Morality must be regarded as the science of organizing a society of men whose highest value is their selfhood and not the efficiency of their machines. Men must learn how to participate consciously in the social discipline that orders all their functions within a society and how to keep these functions in balance....for the first real line of defense against war is man himself, and where man is socially disorganized and devalued, the universal enemy will enter the breach."— Dr. Maria Montessori—*Education and Peace*, p. xiv.

"It is the art of being among other human beings, which is based on certain feelings and ways and manners that facilitate living together."—Dr. Maria Montessori—*NAMTA Journal 26:3*, p. 181.

"The goal of life, touched by the soul, is to be strong enough for life, for the mission, to overcome obstacles, to acquire more ability than already given by nature, to enter the Supranature."-- Dr. Maria Montessori— *NAMTA Journal 26:3*, p. 195-96.

Nature/Supernature (Supranature)

Montessori's vision that humanity would evolve and construct a "supranature"—an extension of nature that will bring about an ever greater dimension of human creativity and understanding; an changed human for a changed society.

"The 'supra-natural' man is the king of the earth, of all things visible and invisible, he penetrates the secrets of life, growing new flowers and breeding new animals that are supercreations [sic], increasing through chemistry the natural produce of the earth, transforming thins as though by magical powers."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 77.

"He may be born to be the king of the universe. But he cannot reach this goal if he remains merely one of the creatures that inhabit the earth. He must live to realize his life's purpose, which is not visible in this world nor evident in nature. He advances toward his goal without seeing something superior to nature."—Dr. Maria Montessori, *Education and Peace*, pg.96. "Man then works with a true spirit of sacrifice and by his work transforms the environment, creating another world that pervades all of nature. This world is something more than nature, for to build it man uses everything that exists in nature. Man creates a supernature [sic]. And man's suprenature [sic] is different from ordinary nature. "--Dr. Maria Montessori, *Education and Peace*, p.97.

Normalization

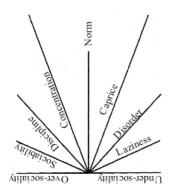
Is a process that brings the child back to the path of normal development, unhindered by adult interference; Normalization comes from the child's work in constructing his personality or self-perfection. The prepared environment aids this where the child is supported to concentrate, uninterrupted, on meaningful work that is freely chosen. E. M. Standing lists the characteristics of a normalized child thusly: a love of order, love of work, profound spontaneous concentration, attachment to reality, love of silence and of working alone, sublimation of the possessive instinct, power to act from real choice and not from curiosity, obedience,

independence and initiative, spontaneous

self-discipline, and joy.

Characterized by 4 attributes:

- 1. A love of work or activity
- 2. Concentration on an activity
- 3. Self-discipline
- 4. Sociability or joyful work



"Actually, the normal child is one who is precociously intelligent, who has learned to overcome himself, and to live in peace, and who prefers a disciplined task to futile idleness."—Dr. Maria Montessori, *The Secret of Childhood*, p. 148. "Through concentration, Dr. Montessori, believed children develop an inner calm that they bring to their other activities in the classroom. Dr. Montessori called the peace that saw to be achieved through concentration "normalization," because she observed that most of children's troublesome behaviors disappeared when they experienced concentration on meaningful activities."—Angeline, Stoll Lillard, *Montessori: The Science Behind the Genius*, p. 50.

"The transition from one state to the other always follow a piece of work done by the hands with real things, work accompanied by mental concentration. This psychological event, which brings to mind the cure of adults by psychoanalysis, we have called the technical term, "normalization."—Dr. Maria Montessori, *The Absorbent Mind*, pg. 204.

Occupations

Can be seen as project based education, where the students are put in charge of their environment consisting of real, authentic work that contributes to the whole of the micro-economy of said environment. On a deeper level, it brings the child back to their study of early civilizations of man.

"Independence, in the case of the adolescents, has to be acquired on a different plane, for theirs is the economic independence in the field of society. Here, too, the principle of 'Help me to do it alone!' ought to be applied."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 67.

"For it is not the country itself that is so valuable, but work in the country and work generally, with its wide social connotations of productiveness and earning power. The observation of nature has not only aside that is philosophical and scientific, it has also a side of social experiences that leads on to the observations of *civilization* and the *life of men*."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 68.

Personality/ Character

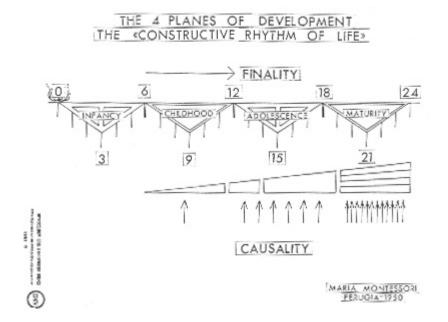
May I be so bold as to state that this is the motivation behind how the method was developed? The child's whole personality and his character development is at the center of the method. In, fact, I would say that the method would unravel if this is not understood upper and foremost. The method has a broader vision than academic success.

"The goal of Montessori education is the formation of the child's whole personality. In the beginning, the child works mainly independently, but it observes what others around it do, especially the older children. Presently, it starts to collaborate with others. The older children participate in the activities of younger ones and help them in a natural way that both enjoy. Instead of competitiveness, there is cooperation. This enhances the children's feeling of security and stimulates them to further exploration of their world. Respect for others and for the environment comes as a natural byproduct of the freedom within a community they experience. It is interesting to note that several of the characteristics so often exhibited in Montessori schools are considered basic to human welfare and development by social scientists. In a list of properties of biosocial and sociocultural systems, Eric Trist (Towards a Social Ecology) mentions selfregulation, integration, independence, interdependence, coordination, and cooperation as basic to welfare and maturation, learning extended adaptability, the accumulation of culture, and expansion of the environment. Because these are all properties that are explicitly encouraged by Montessori education, it certainly deserves serious consideration in the search for the best means to prepare tomorrow's citizens."—Dr. Mario Montessori, Jr., *Education for Human Development*, 1976; www.postoakschool.org

"In this fierce battle of civil life a man must have a strong character and quick wits as well as courage; he must be strengthened in his principles by moral training and he must also have practical ability in order to face the difficulties of life."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 61.

Planes of Development

Four determined phases identified by Dr. Montessori as infancy (0-6yrs), childhood (6-12yrs), adolescence (12-18yrs), and maturity (18-24yrs). Each plane contains sensitive periods/sensitivities. Each sensitivity arises, crests and fades as illustrated by the triangular peaks of her illustration. The planes are sequential, cyclical, and occur only once. The first and third planes are considered to be creative periods in a child's life, whereas the second and fourth planes are described as "calm phases of uniform growth" (Grazzini 31). The first and third planes are also divided into distinct sub-planes, each with its own unique changes. Generally, the first halves of the sub-planes are the most active in self-construction. The "absorbent mind" is located within the first sub-division of the first plane.



"Development is a series of rebirths."—Dr. Maria Montessori, *The Absorbent Mind*, p. 19.

"But the planes of development are necessarily also interdependent, for the human being is always a unity."—Camillo Grazzini, "The Four Planes of Development", p.38.

"One of the first essentials for any adult who wishes to help small children is to learn to respect the different rhythm of their lives, instead of trying to speed it up, in the vain hope of making it synchronize with ours."—E. M. Standing, *Maria Montessori: Her life and Work*, p. 145. "This means the child, from birth, must be regarded as a being possessed of an important mental life, and we must treat him accordingly."—Dr. Maria Montessori, *The Absorbent Mind*, p. 66-67.

Planes of Education:

Montessori's educational structure supports the observed developmental needs. Each environment is designed to respond to each plane's sensitivities and sensitive periods with the overarching needs and tendencies always in view.

First Plane Child: infant and toddler room and children's house Second Plane Child: More individualized work with Great Stories and Lessons designed to spark their imaginations and intellect. Third Plane Child: Occupations, meaningful work within micro-society

and economy, alongside an adult who has now become a materialized abstraction in the prepared environment. The farm is the basis for the prepared environment for the first sub-plane and the town is the basis for the prepared environment for the 15-18 year old.

Fourth Plane child: Entering maturity, taking on full adult role in macrosociety and economy.

Preparation of the Adult

Involves intense self-evaluation to rid the adult of any deep seated defects; To be aware of his own deficiencies and not to focus on any perceived child's defects; Is an ongoing process realizing it is impossible and not necessary to remove all defects before teaching; should include an intentional and ongoing self-reflection and evaluation. In addition to selfreflection, the prepared adult needs to understand the developmental needs of each age. Observation is key to best serve those needs. Certainly a belief in the natural drive to learn needs to undergird our observations and interactions within the environment. The Prepared Adult is the link between the child and the prepared environment.

"We must be taught and we must be willing to accept guidance if we wish to become effective teachers."—Dr. Maria Montessori, *The Secret of Childhood*, p. 149.

"A teacher should reflect often upon a child's predicament."—Dr. Maria Montessori, *The Secret of Childhood*, p. 151.

"But still we must be humble and root out the prejudices lurking in our hearts. We must not suppress those traits which can help us in our teaching, but we must check those inner attitudes characteristic of adults that can hinder our understanding of a child."-- Dr. Maria Montessori, *The Secret of Childhood*, p. 153.

"The teacher, when she begins work in our schools, must have a kind of faith that the child will reveal himself through work. She must free herself from all preconceived ideas concerning the levels at which the children may be. . . .In her imagination she sees that single normalized type, which lives in a world of the spirit. The teacher must believe that this child before her will show his true nature when he finds a piece of work that attracts him."—Dr. Maria Montessori, *The Absorbent Mind*, p. 276.

"In the psychological realm of relationship between teacher and child, the teacher's part and its techniques are analogous to those of the valet; they are to serve, and to serve well; to serve the spirit."—Dr. Maria Montessori, *The Absorbent Mind,* p. 281.

Prepared Environment

Based on observation, the environment is designed to support the child's natural tendencies. Its very nature is to support the child's growing independence—the need to do it himself. The prepared environment should reflect and create a space where all the human tendencies can be met: exploration, orientation, order, communication, to know and reason, abstraction, imagination, mathematical mind, work, repetition, exactness, activity, manipulation and self-perfection. Overall this, the atmosphere of the prepared environment needs to be calm and orderly: "a place for everything and everything in its place." (Montessori) A tragedy occurs when a child's energy is thwarted due to an inadequacy in the environment. Molly O'Shaughnessy gave us good questions to ask ourselves about our prepared environments.

^(*) Does the environment respond to the sensitive periods?

- [♥] Is it beautiful, clean, orderly, and aesthetically pleasing?
- Are the materials displayed from simple to complex and in the proper sequence?

- * Are the children caring for the environment or are the adults?
- [♥] Are freedoms respected and encouraged?
- ♥ Are presentations timely, effective and protected?

It is important to note, that the "directress" is also a part of the environment and must prepare herself as well, reflecting upon her biases, moods, responses and beliefs. This is especially true with children in the third plane of development. As Laurie Ewert-Krocker stated in her lecture, "We are the adults they are studying about."

"The children (properly guided, of course) actually enjoy preserving this order which they find around them; whilst at the same time this same order, sinking into their souls, strengthens and fixes the disposition already there." E. M. Standing, *Maria Montessori: Her Life and Work*, p. 271 "A place for everything and everything in its place." E. M. Standing, *Maria Montessori: Her Life and Work*, p. 271.

"The immense influence that education can exert through children, has the environment for its instrument, for the child absorbs his environment, takes everything from it and incarnates it in himself." Dr. Maria Montessori, *The Absorbent Mind*, p. 66.

"It follows that the child can only develop fully by means of experience on his environment. We call such experience "work."—Dr. Maria Montessori, *The Absorbent Mind*, p. 88. "The environment must be rich in motives which lend interest to activity and invite the child to conduct his own experiences."—Dr. Maria Montessori, *The Absorbent Mind*, p. 92.

Sensitive Periods/Sensitivities

A term describing a child's mental growth; a specific time period during a child's development that focuses on a certain skill or ability, such as language or orientation. A child is naturally inclined to seek out those stimuli that will develop a particular skill that is opened up by this sensitive period. Once the skill has been learned, the sensitive period disappears and another period will take its place. Montessori purports that if the child is frustrated during a sensitive period and does not acquire the ability it is biologically and developmentally ready for, the moment passes and is not seen again.

"A sensitive period refers to a special sensibility which a creature acquires in its infantile state, while it is still in a process of evolution. It is a transient disposition and limited to the acquisition of a particular trait. Once this trait, or characteristic, has been acquired, the special sensibility disappears....Growth is therefore not to be attributed to a vague inherited predetermination but to efforts that are carefully guided by periodic, or transient instincts."—Dr. Maria Montessori, *The Secret of Childhood*, p. 38 "Growth and psychic development are therefore guided by: the absorbent mind, the nebulai and the sensitive periods, with their respective mechanisms....But the promise they hold can only be fulfilled through the experience of free activity conducted on he environment."—Dr. Maria Montessori, *The Absorbent Mind*, p. 96.

"...but the distinguishing feature of growth during a sensitive period is that an irresistible impulse urges the organism to select only the certain elements in its environment, and for a definite and limited time, i.e., only for as long as the sensibility is present."—E. M. Standing, *Maria Montessori: Her Life and Work*, p. 118.

"In sum, Dr. Montessori believed there are sensitive periods in which particular environmental input is especially interesting to children, and that educators should capitalize on such periods by providing a great deal of high interest input at the right time. The child is in a period of selfconstruction and is biologically tuned to be interested in what will best provide for that construction. She believed that by watching children closely, noticing what interests them, and providing environmental assistance for them to pursue those biologically guided interests, adults can assist children's development."—Angeline Stoll Lillard, *Montessori: The Science Behind the Genius*, p. 126.

Social Development

Strong social skills develop as the child lives and learn through all the stages in a multi-age society. In the Montessori Method, this is done by interacting with the prepared environment. Includes lessons in grace and courtesy, which re-enforce the normalized concepts of respect for self, others and the environment; daily, the child practices living in peace;

"Everything that concerns education assumes today an importance of a general kind, and must represent a protection and a practical aid to the development of man; that is to say, it must aim at improving the individual in order to improve society."-From Childhood to Adolescence, p. 59. "The chief symptom of adolescence is a state of expectation, a tendency towards creative work and a need for the strengthening of self-confidence. Suddenly the child becomes very sensitive to the rudeness and humiliations that he had previously suffered with patient indifference. These reactions, bitter rebellious feelings, sometimes give rise to characters that are morally abnormal; while this is the time, the "sensitive period" when there should develop the most noble characteristics that would prepare a man to be social, that is to say, a sense of justice and a senses of personal dignity."-Dr. Maria Montessori, From Childhood to Adolescence, p. 63. "He has a sense of dignity. He feels that he is observed. He does not wish to be held at less worth than others. He wants to take the first steps in social life and he is anxious as to the figure he will cut."—Dr. Maria Montessori, NAMTA Journal 26:3, p. 179.

Society by Cohesion

Naturally occurring phenomena of unity and solidarity within groups of young children where the greater good of the group is considered more highly than personal fulfillment. A true esprit des corps—not forced upon them from above but driven by an instinct from within the child in which he identifies and aligns himself with a group of his own. Here is where an individual's work contributes to and serves the whole group. "The first step towards a social consciousness recalls the 'spirit of the family or tribe', for in primitive societies, as is well known, the individual loves, defends and values his own group, as the end aim of his existence. The first signs of this phenomenon amazed us, because they occurred quite independently of us, or of any influence that we could have exerted. ...This unity among the children, which is produced by a spontaneous need, directed by an unconscious power, and vitalized by a social spirit, is a phenomenon needing a name, and I call it 'cohesion in the social unit'."— Dr. Maria Montessori, *The Absorbent Mind*, p. 232.

"The idea was forced upon us by the children's spontaneous actions, which left us speechless with astonishment... This sense of solidarity, not instilled by any instruction, completely extraneous to any form of emulation, competition or personal advantage, was a gift of nature. Yet it was a point to which those children had reached by their own efforts."—Dr. Maria Montessori, *The Absorbent Mind*, p. 233.

"Society does not depend entirely on organization, but also on cohesion, and of these two the second is basic and serves as foundation for the first. Good laws and good government cannot hold the mass of men together and make them act in harmony, unless the individuals themselves are orientated toward something that gives them solidarity and makes them into a group. The masses, in their turn, are more or less strong and active according to the level of development, and of inner stability, of the personalities composing them."-- Dr. Maria Montessori, *The Absorbent Mind*, p. 237. "Children act in accordance with their natures, and not because of the teacher's exhortations. Goodness must come out of reciprocal helpfulness, from the unity derived from spiritual cohesion. This society created by cohesion, which children have revealed to us, is at the root of all social organizations."-- Dr. Maria Montessori, *The Absorbent Mind*, p. 242.

Three Period Lesson

The basic organization of a presentation of a lesson (based on Séguin's): Naming, recognition, recall; a response to the naming sensitivity of the child. John McNamara expanded the three period lesson to a 3 stage inquiry: Arousal of interest, active participation by student, student demonstrates knowledge. The first period can be the briefest and is designed by the prepared adult to ignite a desire to know more. The second period is consumed by the work of the student, exploring, discovering, inquiring, researching, etc. May contain mini lessons to help guide and clarify and move the process of learning along. The third period lesson is the presentation of the learned knowledge by the student to the community. Period 1: The teacher gives the gift; Period 2: The child works with the gift; Period 3: The child gives the teacher (community) back the gift. "Montessori does however lay down certain general principles with regard to the giving of lessons. One is that—in presenting the materials—the directress should say no more than is absolutely necessary. Whatever she

adds beyond this tends to confuse and distract."—E. M. Standing, Montessori: Her Life and Work, p. 307.

"The Bergamo Proposition: Period 1—The teacher gives the gift; Period 2—The student works with the gift; Period 3—The student returns the gift."—Mr. David Kahn, Lecture, 6.19.12

Valorization

What normalization is to the child of the 1st and 2nd plane, valorization is to the adolescent and burgeoning young adult. Valorization is built upon the normalization constructed in the first two planes. Valorization is a sensitivity in the adolescent where their successful contribution to their society needs to be felt and their voice needs to be heard. The adolescent needs to find a role in their society where their work is valued and their personality is appreciated and valorized.

"For success in life depends in every case on self-confidence and the knowledge of one's own capacity and many-sided powers of adaptations. The consciousness of knowing how to make oneself useful, how to help mankind in many ways, fills the soul with noble confidence, with almost religious dignity. The feeling of independence must be bound to the power to be self-sufficient, not a vague form of liberty deducted from the help afforded by the gratuitous benevolence of others. There are two 'faiths' that can uphold man: faith in God and Faith in himself. And these two faiths should exist side by side: the first belongs to the inner life of man, the second to his life in society."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 64.

"...and the land-child must see that society is in a state of ascent from nature in which he, as a civilized and religious man must play his part."— Dr. Maria Montessori, *From Childhood to Adolescence*, p. 69.

"It is better to treat an adolescent as if he had greater value than he actually shows than as if he had less and let him feel that his merits and self-respect are disregarded."—Dr. Maria Montessori, *From Childhood to Adolescence*, p. 72-73.

"The whole aim of the Montessori system can be summed up as the 'valorization of personality' at each stage. This involves, amongst other things, that the child should acquire as much independence as is possible for him to acquire at each stage of development."—E.M. Standing, *Maria Montessori: Her Life and Work*, p. 177.

Work

Work is the vessel to whit a deviated child returns to normalcy. It is a natural, inborn drive within the child that follows the sensitivities and tendencies therein.

"How does he achieve this independence? He does it by means of a continuous activity. How does he become free? By means of a constant effort. . . .Independence is not a static condition; it is a continuous conquest, and in order to reach not only freedom, but also strength and the perfection of one's powers, it is necessary to follow this path of unremitting

toil. . . . The child seeks for independence by means of work; an independence of body and mind. Little he cares about the knowledge of others; he wants to acquire a knowledge of his own, to have experience of the world, and to perceive it by his own unaided efforts."—Dr. Maria Montessori, *The Absorbent Mind*, p. 90-91.

"Because the child's work springs from this 'internal fount of energy' it no burden to him. . .But the work of the child is on a higher plane; hence he consciously rejoices in it. . .Work is for him a necessary form of life, a vital instinct without which his personality cannot organize itself. So essential is it for the child to have the opportunity and means for this creative 'work' that if it is denied him his deviated energies will result in all sorts of abnormalities. . .This is Dr. Montessori's doctrine of 'normalization through work'..."E. M. Standing, *Maria Montessori: Her Life and Work*, p. 148.

"A child's desire to work represents a vital instinct since he cannot organize his personality without working: a man builds himself through working." Dr. Maria Montessori, *The Secret of Childhood*, p. 186. "The child has his own way of working, a way different from ours that we must understand and respect."—Dr. Maria Montessori, *Education and Peace*, p. 79-80

"We think the child is happiest when he is playing, but the truth is that the child is happiest when he is working."—Dr. Maria Montessori, *Education and Peace*, p. 78

"All work is noble, the ignoble thing is to live without working."—Dr. Maria Montessori, *From Childhood to Adolescence*, pg. 65.