

How Children Learn and Montessori By Beverley Blount

As we come to the beginning of the second century of the Montessori system of education, Montessorians are in agreement that following the principles and guidelines set out by Maria Montessori a century ago empowers them to present to children an environment that truly “works.” Generations of children have lived the Montessori experience and placed their children and grandchildren in Montessori schools. But who among us really has contemplated the answer to *why* Montessori works?

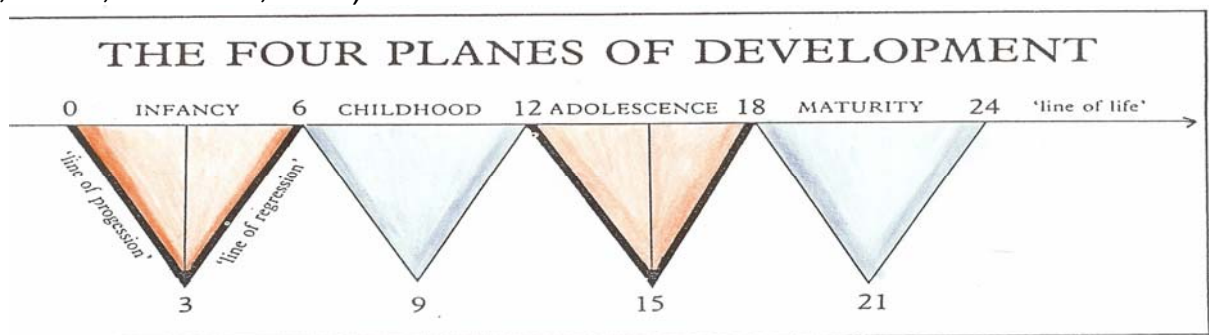
We read one educational study after another that supports the use of hands-on, progressive, self-correcting graphic materials; the freedom of choice in the prepared environment; the trusting of the children’s inner will to always be learning; the importance of bringing the outside into the classroom and taking the children outside; and the understanding that children thrive under the proper challenges. Much has been written during this past century about Montessori without clarifying why her observations of children and her documenting of and experimenting with their natural tendencies produced such a successful method of education. To truly understand the reasons that the Montessori system honors the child’s inner learning processes, one must go back in time: not to the studies of the periods of mankind’s written history, but even farther back, to the beginnings of advanced primates and to the thousands of years of prehistoric humanity. One must look at how children learned then, before modern times and so-called “modern education.”

Looking back at thousands of years of human history, one must realize that during much of this time, children did not learn by being sent to school; large groups of children engaged in rote learning is a development of the last few hundred years.

“It has been widely shown, by recent research, that tiny children are gifted with a psychic nature peculiar to them.” (Montessori, 1995) I feel that parts of these psychic patterns continue, possibly throughout life and can only be nourished by giving the child the most natural environment possible as indicated by Doctor Montessori.

Understanding the terms Maria Montessori used to describe the “planes of development” or “stages” that she observed children pass through to reach adulthood and maturity enables us to compare these planes with the environment in which the prehistoric child lived. During those thousands of years, behavior patterns were established in humans that survive today. Montessori documented these during her years of careful observations of children. Many of her colleagues, such as Freud and Erickson, later integrated these planes into their own theories, giving them other names and relating different psychological reasons for the child’s personality changes during each plane.

The first stage is from birth to age 6 with sub-stages from birth to 3 and 3 to 6; the second stage is from 6 to 12 with sub-stages from 6 to 9 and 9 to 12; the third stage is from 12 to 18 with sub-stages from 12 to 15 and 15 to 18; and the fourth stage from 18 to 24. (Montessori, 1937-1939, 1967, 1995, Grazzini,1973).



(Montessori,1995, Smythe,1966)

As the child is very different and the changes very evident between one plane and the next, it is important to investigate why children pass through these physical and psychological changes during their growth planes. What are the reasons for these planes? Why isn't it better for the children to just grow smoothly from birth to maturity with no abrupt changes? Why are they programmed to have such different stages? Why are we able to say that Montessori has had "100 Years of Innovation and Inspiration?" This article presumes to answer these questions while giving historical reasons for Montessori's planes of development, and, therefore, her educational system.

First, it is important to define the term "reality" I am using when referring to small children and the way they perceive and live their lives.

A child's reality is what he or she actually sees, hears, touches, and lives from birth to 6 years of age. It includes the entire gamut of what they can actually see of their community's inhabitants, occupations and activities. This theory postulates that children born in small, self-sufficient societies have a much larger and more positive "reality" than our "modern" children, whose lives are restricted to living amidst their families and immediate neighborhoods, the shopping centers, eating mass produced foodstuffs, learning of their society through the often artificial and destructive media world, and that they directly see very little that is understandable of adult occupations and the production of the food and articles they use.

The Role of the "Natural" Child in Society

How are children prepared by this psychic nature to become wholesome, productive members of society, and what kind of society should evolve from this natural progression? What piece of the total plan do children represent? How does our modern society fit the child into this plan and the environment into which he or she should be growing? There is no way to know what specific and necessary occupations children will need when grown, especially in our rapidly changing society. There needs to be a multitalented group of youths with enough different types of personalities, myriad physical abilities, and multiple intelligences in order that each new occupation of our future society will have an apprentice preparing to fill that currently unknown activity.

The very first humans gathered into small self-sufficient groups: cave dwellers, nomads, clans, hunter-gatherers, and extended families. Later, they developed small villages, agricultural groups, hamlets, defensible areas, and so on. The inhabitants of these small societies could walk across the immediate boundaries of their communities without too much trouble, and this space was the free territory of the children of the past. The young of even our immediate past learned by experiencing life in a context of seeing actual people doing their work. Children appear to be programmed to want to observe and manipulate real articles in order to learn from others and understand what they need to survive as individuals within their society. (Blount, 2006, p.40)

Thus, Montessori was correct in stating that children need to physically act upon their environment in order to satisfy their immense desire and will to understand their world.

The First Plane of Development: Birth to 6

During this first plane of development, the two-year-old who said, "Now that I've got my legs, I'm off. Good-by," (Montessori, 1995, p. 155) would literally walk out the door of his or her dwelling and for the following years would not be cared for by adults but by the older children in his or her group. The child's territory would have been the expanse of the village, cave, habitat, or neighborhood. One of the problems of parents today is that they are unable to give the children the time and space for walking that they so need. In *The Absorbent Mind*, Montessori comments in Chapter 13, The Importance of Movement in General Development:

The very existence of the social order depends on movement directed to constructive ends. (p146). ...To have a vision of the cosmic plan, in which every form of life depends on directed movements which have effects beyond their conscious aim, is to understand the child's work and be able to guide it better. (p.147)

The prehistoric “gang” of children I am envisioning would wander freely around their village from the time they were toddlers, watching the adults at work in their many obvious, easily understood, and real occupations such as weaving, planting, harvesting, cooking, husbandry, marketing, crafts, exploring, art, music, hunting, agriculture, weaponry, protection, warring, leadership, spiritual rituals, and more. All the children would know the occupations of their parents; they would see them at work every day. The smallest children would be watched and guided by peers just older than themselves, and those older children in turn by the next oldest. Adults would not be the caretakers for the children out of arms; their occupations would keep them far too busy. In their daily wanderings, the children would copy and construct as best possible the tools and materials of the different trades they observed and try to learn how to use them themselves by constant repetition. (2006, p.43)

One of the key aspects of Montessori education is the use of the hand. These children would be using their hands all day. She says in *The Secret of Childhood*:

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.” (Montessori, 1966, p.81)

What some people call “playing” is actually children recreating a miniature “real” society at their own level. In pre-twentieth century times, children would not be using abstract “toys” that represented a society completely different from the one in which they lived. There would be no toys that were not imitations of adults’ tools nor need for them. Typically in museums, any “toys” found in archaeological excavations other than dolls are things for throwing, miniature animals, art materials, child-sized weapons, and armor, all small copies of those articles used every day by the adults of their community. These children would use cast-off articles and bits and pieces of natural objects to try to imitate the adult world they were observing. They would construct small dwellings and act out roles in their own miniature community. They would decorate themselves as they saw the elders do—vanity seems to have been an integral part of even the earliest societies. Adults would share bits of yarn, seeds, rope, pottery earth, bread dough, weapons, scraps of cloth, and other tools of their trades for the children to practice with. Even a toddler would be able to understand and try to imitate the actions of the adults around him and, by the time he reached the age of 6, he would probably be turning out recognizable copies of those adult activities. (2006, p.44)

As the first plane of development ended, the 6-year-olds would already be well-founded in the social structure of the society to which they had free access. They would also begin to be the messengers within their society and, in all ways, tremendously useful to the adults of their clan. Young children probably were already helping the craftsperson to whom they were most attracted by their own talents, physical abilities, and psychological makeup. Children would be able to work in apprenticeships of those crafts that most attracted them. (2006, p.44)

At this point, the child, at the threshold of the second plane, would now be ready to become the hardworking 6- to 12-year-old that Montessori describes from her observations. During this period the young apprentice would pass through a period of intense learning of the craft that would become his or her life’s work. Montessori comments that the child in this plane in all societies is a very special young person: he is calm and capable of intense learning. He respects, admires, and wants to learn from the adults and peers around him, and seeks to know about their society and its rules.

The Second Plane of Development: 6 to 12

The children in the second plane would sort themselves out among the tribal occupations they would have been observing from the time they were toddlers. Their innate talents, psychological makeup, and physical abilities would play a part in their assuming a place in the community. Some of the very necessary male roles in a primitive society would have been hunters, explorers, warriors, and scouts. All of these men would need apprentices who possessed certain characteristics. For example, the hunter in a dangerous forest would need his apprentice to be someone who could be physically active for many hours and who could develop an intense 360-degree awareness of his surroundings. He would need to be able to pick up any sound or sign that might indicate danger, such as a bear or tiger stalking the hunting group, or the imminent attack of a group of marauding humans. At the moment of approaching their designated prey, the hunter and his apprentice would need to be able to concentrate on the animal that was the target they were stalking. I believe that we can recognize the hunter's apprentice in the ADHD children we encounter in our schools today as they are often very conscious of movements going on around them but have difficulty concentrating on that which is immediately in front of them. Their problem in concentrating on what is directly in front of them compares to the way the hunter has no need to see his immediate surroundings (he had recorded them when that area was still at a distance). This may, in part, explain why a majority of ADHD children are male. (2006, p.48)

The hunter/explorer/warrior would not have wanted the quiet, patient, artistic weaver-type for his apprentice, nor would the weaver want the hunter's hyper-active apprentice. The weaver-type exemplifies a personality exactly the opposite of the hunter. Even today, that personality needs to be able to be almost immobile all day, and to be able to memorize complex fabric patterns and reproduce them from memory on the weaving frame. The weaver does not need to know or care what is going on around him, but rather must concentrate on the task immediately in front of him. This is the personality type that today's traditional schools love, but it is not so common: the ancient societies did not need as many weavers as they did hunters/warriors/explorers.

The child in the second plane of development would ideally be apprenticed by the person whose craft most closely matched the child's personality and physical abilities. (2006, p.49) These six years of preparation would have aided the young apprentice to become more and more useful and adept until he reached the next stage of development, a period of radical change that today we call adolescence.

The Third Plane of Development: 12 to 18

Between the ages of 12 and 15 (the first half of the third plane of development), the young people in these earliest communities would have become well prepared to earn their living in their selected craft. Social bonding would have knit this younger generation together with the community's older members. By this time, many female children would have already had many years of child and home care experience with their siblings and neighbors and this experience would prepare them to care for their own offspring as, during this period, youths would search for their partners and mate. The new couple would have to become an integrated part of their society and would have started their families during the second part of the plane, between 15 and 18. (2006, p.49)

During the last few centuries, it slowly has become necessary to put this pairing period off for more than ten years, causing upheavals in the natural progression of the child's still existent internal programming. Adolescence has become a most difficult period for young people.

This is not to propose that today's children mate between 12 and 18, although they are still doing so in many primitive societies. *"Almost 99 percent of population growth now occurs in the developing world..."* (Carty, 2002)

We need to explain to the young adolescents the reasons why their bodies are passing through this disturbing period that moves them toward consequences no longer acceptable in our society. They must prepare to wait at least ten more years before seeking a mate and entering the childrearing period.

In *To Educate the Human Potential*, Montessori talks about the lethargy and slowing of the mental development during this growth plane in the child's life:

It is an error to expect hard work and unimpeachable progress during the age of Puberty. Indulgence should be shown to those who lag at this time. The life of [humans] is whole in its length, like a cord. Touched in one part, the whole length vibrates, so there may be far-reaching consequences in adult life to some occurrence that seemed trivial in childhood and as unfavourable happenings are likely during these weakened planes, the teacher's responsibility is great towards humanity. (1967, p. 116)

During the third plane of development, children may have the curiosity but not the strength and will necessary to overcome this lethargy, causing their families to lose patience with them and accuse them of being lazy and inattentive. It is very much the age for going out, daydreaming, and watching nature.

During this period, these youths (today's Middle School), find this newly discovered attraction between sexes an overpowering novelty, all else becomes secondary. "Their character is seldom stable at this age; there are signs of indiscipline and rebellion." (1995, p. 21)

The Young Adult: From 18 to 24 - The 4th Plane

The adolescents now would become full adults and, as described in Montessori's planes of development, become calmer. (The planes go roughly along with the changes of teeth; we get our first permanent teeth and six-year molars at the change of the first plane, our 12 year molars at the change of the second plane and after age 18 we finally get our "wisdom" teeth.) This plane in the adolescent's development as studied by Montessori is described by Standing:

Other traits in the adolescent she mentions are "a state of expectation, the tendency towards creative work, and a need for the strengthening of self-confidence."

Whereas in the preceding epoch the individual tended to be an extrovert, the adolescent tends to look inward. It is one of those mysterious periods when something is being formed which does not yet exist; a "mystery of creation" which is taking place within him independently of his own will—the creation of the socially conscious individual.

Just here—according to Montessori—is the crux of the whole matter, the most essential feature of adolescence, and therefore the most important for all those who have to do with the training of adolescents. There is being born in [them] a new "sensitive period" which reveals itself in a greatly increased sensitiveness to all facts and experiences which relate to his life as a social being. For the first time he becomes clearly conscious of himself, not simply as an individual—i.e., a member of a herd or gang—but as a separate member of human society with all that it implies. He feels, for instance, the need of being treated with a new kind of dignity and respect. Similarly he becomes acutely sensitive to all forms of criticism; and is quick to imagine he is

being ridiculed. He feels himself observed; and is anxious to cut an equal figure with those around him. He begins to be acutely conscious of differences in social status. Such matters as clothes, pocket money, personal appearance become of great importance to him—things which did not bother [him] so much in the earlier period.

Compared with the “tough guy” of the preceding period (8-12)—he is like a crab which has just cast its old strong shell, while the new one is still soft and sensitive—a dangerous condition. “It is just because this is the time when the social man is being created—but has not yet reached his full development—that many defects in adjustment to social life take their origin. For example, a feeling of inferiority at this period may give rise to an ‘inferiority complex’; and there may arise a repugnance to social life which may endure for years. Such defects in social adjustment may have dangerous consequences for the individual, resulting in timidity, anxiety, depression, as well as the inferiority complex just mentioned.

Bad results may follow for society, too, in the form of incapacity for work, laziness, dependence on others, a cynical outlook, and even “criminality.” Here—in the problem of social adjustment—lies the really vital problem of education for adolescents (far more vital than simple passing of examinations).

How would Dr. Montessori have us organize the life of the adolescent so as best to respond to his dominant need of right social adjustment? ...It must suffice to note that Montessori would have the whole life of the adolescent revolve around this idea of society, its structure, and its obligation. ...the life of the adolescent would be so arranged that, through his participation in a special form of social life (the new “prepared environment” which corresponds to this plane), he would be made ready for his participation in the great world of adult society. Through his studies, which would be related to practical activities, he would become acquainted with the structure of society —its very ligaments— which are production and exchange; because, says Montessori, “the basis of all civilization rests on the products of the earth.” As each previous plane of development was marked by the acquisition of new forms of independence, in this last plane, the form of independence that is most necessary for the adolescent to acquire is economic independence. ...We can only lay down the general aim—that “the whole life of the adolescent should be organized in such a way that it will enable him, when the time comes, to make a triumphal

entry into social life—not entering it debilitated, isolated, or humiliated, but with head high, sure of himself”. (1962, pp. 116 -118)

By this point, young adults in prehistoric times would have been heads of households and providers. They would have to dedicate themselves to starting their family and feeding and clothing them. They now would bear the fruits of their years of apprenticeships and would become self-sufficient and productive, useful, and needed members of their communities. In today’s society, this period compares with the period after age 20 when many young couples are forming their household.

Profile of the Self-Sufficient Community

One of the less obvious occupations of the children of these self-sufficient communities would be that of learning leadership and learning how to function in a group. The groups of children from 2 to 6, running over their community territory, would have already begun to cooperate in group activities. The future leaders of the society would have been earning their leadership positions throughout their childhood and adolescence, and the community would begin to recognize all those members to whom they could possibly entrust the general decisions of their society; they would support the ones who had already started to prove their leadership abilities by helping their peers successfully carry out their activities.

Some members of the societies might have become wanderers, explorers, and traders. Even these seemingly lonely or very curious people would have their place in their society’s total fabric as they would travel from community to community bringing fresh ideas, new merchandise, and discoveries from other places.

Why were prehistoric children programmed to learn a trade and marry so young? This answer is the basis for this story: because they needed to find their mate during the first half of plane three between ages 12 and 15. In turn, this led to the calm, working second half of the third plane, between 15 and 18 years of age, and through the next plane to age 24 where they supported and raised their children. It would have to be the most productive period of their lives. It all makes sense when we look at life expectancy; in pre-twentieth century times, most people did not live beyond age 30. There are still poor nations today with national averages for life expectancy of 30 to 40 years. Successfully passing these learning planes by age 24 would ensure they had time to give their own children a start on life.

In this past century medical care has improved and life expectancies have increased, granting many societies a gift of 40 or more years of life, but our internal biological clocks don't know that. Our children's clocks are still running on prehistoric time. Although in many rural communities today improved medical care has added years to life expectancy rates, their customs continue to encourage very young girls to marry and have children.

Most nations start formal schooling for children somewhere between 6 and 7 years of age and the divisions of middle school, high school and further professional studies are roughly the same all over the world. This is not because all nations at last agree on something, but because all *children* reach similar planes at around the same ages and the way they learn changes in the manner that Montessori describes during her descriptions of the child during each plane. The child of six who begins elementary school has already passed through what many people, especially Montessorians, would consider the most important formative years of their lives. The formation of the child's personality and the way he will face the trials of the world are already in motion. His fate will lead him down many different paths but his flowering as a human being and the ways in which he responds to the events of his life will depend a great deal on his childhood environment and the encouragement he received in the use of his physical and mental abilities during the first plane of life, from birth to age six.

Many of today's problems with young children come from the absence of an environment where they are able to live in a simple, unhampered manner. Many children no longer have the opportunity to run free with their peers within a large territory; outside of recess they often only interact with adults and they spend hours in dormant positions watching television or playing video games, instead of freely interacting with their pals.

Looking at children who have problems in school and considering their world as compared with that of pre-20th century children, one can picture the absence of the natural freedom of choice, hours of physical activity, and the interaction among peers that today's children should have, but do not.

The Child in Today's Society

How can we, as educators, try to assure that the children's internal rules do not continue to be violated by our modern society, which often attacks all of the instincts so carefully programmed into the new human? How can we offer actual real-world experiences to the young child, many of whose only realities seem to be aggression, conflict, fantasy, and lack of free contact with their peers? Many children go to adult-controlled classes after school and find recess their only free environment; neither setting offers occupations for the children to observe. What can we do to make sure that our children will face the world with self-confidence and with confidence in the people around them? How can we help them walk in an understandable world? The answers lie in remembering the village and the way children have learned through the ages. An environment where small children can observe and have the chance to freely imitate the activities of those around them is the answer.

It is difficult for young parents to understand that their small children must live in a world that they can understand in order to be able to auto-construct their futures as adults, especially since it seems that many of the human activities today's children see are the portrayals in the media of wars, destruction, murder, as well as music, and art. Children who need to walk for hours every day, observing and acting upon their environment, are now strapped for hours in cars and then wheeled in carts around shopping areas, employing little of the physical movement so necessary for their development.

This is why I choose Montessori for my own daughters and have dedicated my life to Montessori. A Montessori school tries to get the atmosphere of a tiny human community into its classrooms. Although unable to squeeze all the activities of an entire human society in one building and its surroundings, the Montessori environments are full of materials covering a multitude of skills and sensorial trainings. The children are free to talk and interact with their peers of different ages and to watch them at work. Each exercise is a bit more difficult than the one that comes before and children are stimulated to continue by watching older children using the materials that comprise the next step. The children are attracted to the material because of its beauty and the intellectual challenges it provides, and they are guided into working with the more advanced work by constant presentations of the use of each piece of material and by observing their peers. The children choose the material that their subconscious sensitive period needs. Just as in the village atmosphere, there are no “toys,” only intellectually stimulating natural materials. Each material has its own control of error, thus aiding the children to figure out for themselves a way to master it. The teacher/guide takes the place of the hardworking craftsman in the village: She presents the use of the material as though it were her own work and then leaves the child to experience the work by whatever necessary manipulations are required. Ideally, as the children grow, the environment should cover more and more space, often taking the child away from the school environment into the outside world. As they progress through the planes of development, they need to experience their world both by observing and by working on practical problems.

In the self-sufficient small communities of pre-twentieth century times, every human needed to be occupied by a *constructive* work. The community could not exist without each of these workers and each one had an equally important place in the community puzzle. Each of the members of the community possessed the psychological certainty that they were a needed, important and useful member of the society (compare this with many of the psychological disorders developed by humans today who feel useless). Prehistoric children also instinctively felt the importance of *their* work. They could see that they were preparing both for their future and the future of their community.

Two of the most important fundamental needs of humans of all ages are the need to feel *useful*, and the need to have the environment necessary to *develop an occupation* that best fulfills the individual's talents and physical abilities. The role of childhood in the historical society was a most essential one; children were engrossed in the totally important work of creating a self-sufficient adult.

As teacher/guides, we cannot imagine what the children in our classes will become as adults nor can we foresee what occupations will be available for them. We can only depend on Montessori's wisdom in offering each child as broad a range of experiences as possible and obey her instructions to "follow the child."

References

Blount, B. (2006), Montessori cosmic education in the Christa McAuliffe School, Unpublished Masters Thesis on file TIES-Endicott College, Beverly, Mass.

Carty, Win. (2002), Poverty fuels developing world's high birth rate, downloaded November, 2006, from Population Reference Bureau.

<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=8115>

Grazzini, Camillo (1973), Four Planes of Development in Montessori Thought xiii AMI International Course for 6-12 in Bergamo, Italy, [6 pages downloaded 6/29/04. <http://ties.bigmindcatalyst.com/cgi/bmc.pl?node=88078#bottom>

Montessori, Maria

- (1937). 24 Lectures, Lecture 2, The Periods of development (3 pages) England: St. Nicolas Training Center.

- (1966) The secret of childhood, New York: Ballantine Books. Trans. Costelloe, S.

- (1967) To educate the human potential, Madras, India, Kalakshetra Publications

- (1972). The discovery of the child, New York: Ballantine Books. (Original work published 1949). Trans. 6th edition: Costelloe, S.

- (1995). The absorbent mind, New York: Henry Holt. (Original work published 1949). Trans: Claremont, C.

Montessori, M. E. b. M., & Mario. (1938-1939). The four planes of development. Lectures in Edinburgh and London GB.

Standing, E.M. (1962). Maria Montessori, her life and work. New York: The New American Library Inc.

BEVERLEY BLOUNT is the owner-director of the Christa McAuliffe and Anglo Montessori Schools in Mexico City. She has a BS in Psychology from Endicott College in Beverly, MA., Magna Cum Laude, Valedictorian, earned her 3-6 certificate from the Peterson Schools, Mexico City in 1965, her 6-9 degree from Montessori Western Training Center in 1998, and in May 2006, completed her Masters in Montessori Integrated Learning from TIES-Endicott College. She has written five bilingual adventure books for children. Contact BeverleyBloun@aol.com.

For further reading...

Andrey, R. (1966), The Territorial imperative. Kingsport, Tennessee: Kingsport Press.

Armstrong, Thomas. (1994), Multiple intelligences in the classroom, Alexandria, VA: Association for Supervision and Curriculum Development.

Gang, P. & Morgan, M., Radical Montessori, CD, The Institute for educational studies, Christchurch, New Zealand [no date].

Gang, Philip. (1989), Rethinking education. Christchurch, New Zealand. Dagaz Press

Luria, A.R., & Vygotsky, .S. (1992) Ape, primitive man and child, essays in the history of behavior. Orlando, Helsinki, Moscow: M. Deutsch Press, Inc. (Original 1930) Translated by Evelyn Rossiter.

Morgan, Elaine. (1980). The descent of woman, NY: Scarborough Books.

Multiple intelligence theory. (1996). Corel Corporation Limited. [On-line]. <<http://www.educ.andrews.edu/burton/html/slide3.htm>>.

Smith, Adam. (1975), Powers of mind. New York, NY: Random House, Inc. (Given name: Goodman, George J. W.)

Smythe, C. (1966). Readings for philosophy, child, family, teacher. Los Angeles, California: Self-published by Montessori Western Teacher Training Program.