

THE SIGNIFICANCE OF THE HAND FOR THE ELEMENTARY YEARS

by Kay Baker

The use of the hand is a physiological sequence. The prehensile nature of the human hand is an evolutionary feature as is the freeing of the hands due to bipedalism. Kay Baker outlines of the human hand's significance to the mind as found in chapter 14 of the Absorbent Mind. In this article, she has created lists that break down the implication of the hand as an expression of the mind, the hand as a companion to the mind, the hand that creates the handiwork of civilization, the hand as a way to social life through manual division of labor. The article also discusses how Montessori pedagogy utilizes the hand and its related capacities to allow the student to understand the nature of human work through the ages, and to see how the hand is the basis of Cosmic Education.

The topic under consideration is the significance of the hand during the elementary years. It is the hand of the human being that is under consideration. In particular, the significance of the human hand in relation to the child in the second stage of childhood, the years approximately from age six to adolescence.

First, let us consider the hand itself. A hand is a prehensile, multi-fingered extremity located at the end of each of two arms of primates, such as human beings. Prehensile means that the hand is adapted for seizing, grasping, or holding, especially by wrapping around an object. Each hand is controlled by the opposite brain hemisphere and thus handedness is determined by individual brain functioning.

The two hands of the human being are the main structures used for manipulating the environment, used both for gross motor skills (grasping large objects—*power grip*) and fine motor skills (picking

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up a tiny pebble—*precision grip*). The use of the hand for these purposes is possible because of the design of four fingers and the opposable thumb. The fingertips contain some of the densest areas of nerve endings on the body.

Two additional features of the human being are the bipedal posture that free the hands for grasping and the location of the eyes in the front that allow the stereoscopic vision necessary for controlled grasping.

While other animals have hands, it seems that the neural mechanism guiding hand movement is a major factor in explaining the dexterity of the human hand. It seems that the central nervous system of the human being has evolved so that the hand is a direct tool of our consciousness. The hands are a precise working organ that enables gestures that express the individual personality. Hands also enable manipulation that externalizes the thought of the human mind.

MONTESSORI'S THOUGHT ON THE HAND

What does Montessori say about the hand? In chapter 14, "Intelligence and the Hand" of *The Absorbent Mind*, she speaks about the hand and makes several points.

- The hand expresses the thought of the human mind.
- The work of the hand expresses itself in the handiwork of the human being, which, over the years, becomes the expression of culture and civilization.
- The hand is the companion to the mind.
- The work of the hand supports social development.

The Hand Expresses the Thought of the Human Mind

The hand is in direct connection with man's soul, and not only with the individual's soul, but also with the different ways of life that men have adopted on the Earth in different places and at different times. 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. The hands of man express his thought, and

from the time of his first appearance upon the earth traces of his handiwork also appear in the records of history. (*The Absorbent Mind* 149)

In this passage, Montessori expresses the idea that the hands are a reflection of the human personality. The hands of the human being can express in gesture what the mind is thinking. Furthermore, the hands express thought realized, that is, abstract thought made visible in concrete form.

The Hand Expresses Itself in the Handiwork of the Human Being, Which, Over the Years, Becomes the Expression of Culture and Civilization

Everywhere we find traces of men's handiwork, and through these we can catch a glimpse of his spirit and the thoughts of his time. (*The Absorbent Mind* 150)

If we want to follow the thoughts of human beings over the ages, we have only to look at their handiwork. People have always found it interesting to look back and investigate what has come before. Exhibitions of an artist's work are presented by museums. Many history books have been written. Scientists investigate natural phenomena by dating rock formations and tracing the evolution of various forms of life. Such investigation also uncovers the influences of the past on a person's knowledge or work.

The Hand Is the Companion to the Mind

Montessori elaborates on the significance of man's handiwork in the history of human beings. She speculates on this point. Imagine if the mind of the human being were to only think, the thoughts would remain within the mind. If the thoughts were only expressed orally, the thoughts would vanish with the spoken word. She comments:

We can see that all the changes in man's environment are brought about by his hands. Really, it might seem as if the whole business of intelligence is to guide their work. For if men had only used speech to communicate their thought, if their wisdom had been expressed in words alone, no traces would remain of past generations. It is thanks to the hand, the companion of the mind, that civilization has arisen. The hand has been the organ of this great gift that we inherit. (*The Absorbent Mind* 150)

The fruits of the imagination are available to all human beings, over space and time, because of the work of the hand.

Hence, the development of manual skill keeps pace with mental development. (*The Absorbent Mind* 149)

The hands, therefore, are connected with mental life. (151)

The intelligence manifests in the work of the hand. Further, in the act of work, the human intelligence is further developed. If one is interested in the development of the intelligence of the human being, one must be interested in the hand. As the mind develops, the hand acts and as the hand acts, the mind further develops.

The Work of the Hand Supports Social Development

There is another aspect of the human being that Montessori discusses in relation to the work of the hand.

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.... Those children who have been able to work with their hands make headway in their development and reach a strength of character which is conspicuous. (*The Absorbent Mind* 151)

The human being is social and associates with other human beings, including human groups such as families, tribes, and nations. As a result of social interactions, human society has developed having a wide variety of values and rituals. There are patterns of behavior governing such social interactions and together these patterns such as language, beliefs, ceremonies, and social norms, form the way of life for the social human being.

But to us the children have themselves revealed that discipline is the result of an entire development only, of mental functioning aided by manual activity.... Tribes, groups, nations are the results of such spontaneous discipline and association. (*To Educate the Human Potential* 13)

A child born into a culture adapts to that culture. Montessori's comment is that if "a child has been unable to use his hands, his character remains at a low stage in its formation: he is incapable

of obedience, has no initiative, and seems lazy and sad” (*The Absorbent Mind* 151). These traits would be deemed negative traits in a person. Such a person would not be as acceptable to the group and hence may suffer from shunning by the group, would not work and therefore could not work, and would have a depressing effect on others. Not only would there be loss for the individual but there would be a loss to human society.

If his hand wishes to work we must provide him with things on which he can exercise an intelligent activity.
(*The Absorbent Mind* 154)

It would seem from these thoughts regarding the human being and the hand that the child must have the opportunity to prepare the self for the work of the hand that stimulates the development of intelligence which in turn allows for further intelligent work of the hand.

The significance of the work of the hand is twofold: The hand is the instrument of the mind and, when used, allows the intelligence to develop; and the work of the hand allows the character of the child to develop. Both developments are necessary for the adaptation of the child to life as a human being, an individual who lives as part of a social group.

IMPLICATIONS OF THE WORK OF THE HAND ON CHILD DEVELOPMENT

In the pedagogical tradition of Maria Montessori, we speak about aiding the life of the child and assisting the development of the child. We use many technical terms to explicate and implement this pedagogy: human needs and tendencies, self-construction, the absorbent mind, the reasoning mind, sensitive periods, psychological characteristics, sensorial, imagination, independence, materialized abstractions, isolation of difficulty, freedom and responsibility. There are specific material objects designed to provide children with sensorial experience of

Knowledge regarding the totality of the universe within space and time is possible only through the power of imagination—the ability to form images built upon previous experience.... Imagination has no barriers of space and time.

abstractions such as geometric shapes, letter sounds, and numbers. All of these ideas are important to the ability of the adult to assist the development of the child.

These ideas have come from the thought of Maria Montessori and her thought realized. They form part of our culture. For these thoughts, we give thanks and then turn our attention to how these thoughts can help us to assist the adaptation of the child. What can the adult do to truly assist the development of the child?

COSMIC EDUCATION: PLAN FOR THE CHILD IN THE SECOND PLANE OF DEVELOPMENT

What has Montessori to say about the child in the second plane of development with regard to assisting their development? First of all, the child in the second stage of childhood is in need of assistance that guides the child in the process of adapting to the universe. In the first stage of childhood, the child has adapted to their world; that is, to their immediate environment. They have experienced elements of the universe but as part of their visible and immediately accessible environment. Now the child needs to be exposed to the universe itself. Some parts of the universe are already known; some are not. Some parts of the universe are visible and accessible; some are not. Thus the existence of the universe is first brought to the child's attention, after which parts of this whole are explored and later fit back into the whole.

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. (*To Educate the Human Potential* 8)

This plan for the elementary child—to give a vision of the whole universe—is called *Cosmic Education*. The core of Cosmic Education is history, both natural history and human history. Cosmic Education addresses the questions of the child in the second plane, the answers to which provide the possibility for adaptation. It is to be acknowledged that Cosmic Education has had its foundation set in the first stage of childhood with many experiences and as much language as possible. How is the universe, that is, Cosmic Education, brought to the elementary child?

If the idea of the universe is to be presented to the child in the right way, it will do more for him than just arouse his interest, for it will create in him admiration and wonder, a feeling loftier than any interest and more satisfying. The child's mind then will no longer wander, but becomes fixed and can work. (*To Educate the Human Potential* 9)

The right way is to put the child in touch with the totality of the universe starting from the time when the inner dictates of nature push the child to seek knowledge beyond the immediate environment. This occurs at the beginning of the second plane of development. It is an important feature of Cosmic Education to rely on the imagination of the human being. Knowledge regarding the totality of the universe within space and time is possible only through the power of imagination—the ability to form images built upon previous experience. This is the reason for exposing the child in the first plane to as many sensorial experiences as possible. The child can imagine a situation of particles huddling together as the conditions becomes colder since the child has experienced huddling under a blanket after playing in the snow. Imagination has no barriers of space and time. The child can imagine that this happened a long time ago, even longer than the wait for their birthday party. Another aspect of the right way is that Cosmic Education gives a child a framework into which all knowledge can be systematically organized. Whatever detail the child might encounter, that detail fits somewhere in the framework of the universe.

Along with the totality of the universe, details are also brought to the child's attention. "In this more advanced period we continue to afford children the opportunity to learn through the activity of the hand, especially in mechanics and physics" (*To Educate the Human Potential* 10). These details arouse the curiosity of the child. The universe is made up of particles. Now the curiosity is awakened. Are there different kinds of particles? If so, what happens when they meet? If there are different particles, what are the different kinds? How can you tell which kind of particle? The child's curiosity is aroused about the details of the working of the universe. The curiosity of the child is not limited but extends to all realms of human inquiry: science, art, theology, philosophy. All of these studied with the human tools of language and mathematics. This is Montessori's answer to promoting lifelong learning. Knowledge of the universe and all its

details is inexhaustible. There is always something more to learn. And what I have learned is that part of my store of knowledge can be applied to whatever I am curious about. Seeing the interrelatedness of elements of the universe stimulates creativity and invention. Put another way, Cosmic Education allows thinking “outside the box.”

Because the child is a human being, learning about what people have done awakens a sense of gratitude. There is a feeling of solidarity and connection to the people who have discovered, invented, and passed down knowledge to us for our greater comfort and pleasure.

What else does Cosmic Education do for the child in the process of adapting to the universe? As a result of Cosmic Education—the acquisition of knowledge and the realization of the interrelatedness of all things in the universe—the emotions of the child are awakened and arouse gratitude to God—the universe and all its furnishings. The gratitude is for being able to consciously live well in the universe because one has become adapted. I fit in.

However, because the child is a human being, the child has a particular adaptation to make—that of a human being in the universe. For that, the child is brought to gratitude to man.

What is very necessary is that the individual from the earliest years should be placed in relation with humanity.
(To Educate the Human Potential 26)

The child will have greater pleasure in all subjects, and find them easier to learn, if he be led to realize how these subjects first came to be studied and who studied them. We write and read, and the child can be taught who invented writing and the instruments wherewith we write, how printing came and books became so numerous. Every achievement has come by the sacrifice of someone now dead. Every map speaks eloquently of the work of explorers and pioneers who underwent hardships and trials to find new places, rivers and lakes, and to make the world greater and richer for our dwelling. (26-27)

Because the child is a human being, learning about what people have done awakens a sense of gratitude. There is a feeling of solidarity and connection to the people who have discovered, invented, and

passed down knowledge to us for our greater comfort and pleasure. Who has not experienced awe at the accomplishment of other human beings and been inspired to contribute to the world in that manner? As an example, we who work aiding the lives of children are paying homage to Maria Montessori. In this way, we show our gratitude.

In summary, the gratitude to God and Man are linked for one cannot study the universe without encountering oneself as a human being living in the universe. Montessori suggests that the child be given knowledge from the whole to the parts during the years of the second plane of development and then, having explored some of the parts, reassemble the parts for themselves as they approach adolescence and in so doing come to gratitude. She says,

The path of education should follow the path of evolution, to walk and to enjoy ever wider horizons. (*The Absorbent Mind* 162)

In this image, the child starts at the beginning and walks along the path of the development of the universe, expanding the horizon all along the way in the process of adaptation. In this process, the child stops along the way, reflecting on the universe, its furnishings, and, in particular, the lives of human beings. What happens as the child stops along the way? The child works to adapt, to build the intelligence, to satisfy curiosity, to sustain curiosity, and thus comes to a feeling of gratitude to God and Man.

Cosmic Education: Content

What is the content of Cosmic Education? What are some of the stops along the way that enlarge the child's horizons? The Cosmic Education plan exposes the child to knowledge and, most importantly, then allows the child to explore this knowledge through the work of the hand. A few examples will suffice.

- Physical Science

Different ways of combining: particles are combined to show that some particles combine, some particles do not. The child is shown precisely how to perform these demonstrations, to observe the results, to record the results. Repetition is encouraged.

Knowledge is given of the work of air: that it moves as wind, that it carries water in the form of vapor, that water vapor condenses as rain. There are demonstrations that the child can repeat and reflect upon the phenomena.

- Life Science

Functions of the parts of a plant are brought to the child with the use of specimens and impressionistic charts. The child can learn the language associated with these functions and be then able to read botany books with understanding.

The body functions of animals are explored through dissection and pictorial comparison of several organs of vertebrates.

- Music

Singing is explored in all its components such that the skill of sight singing is acquired. Stepping the beat and rhythmic clapping are some of the exploratory activities.

Tone bars furnish many opportunities for learning about music scales and transposing scales.

- Art

Geometric design allows the child to gain control of the hand at the same time as coming into contact with shape, proportion, color, and creative design.

A multimedia approach gives the child varied experiences and techniques that allow the exploration of art, another expression of the thought of the human being.

- History

The story of the human being is a constant in Cosmic Education. Exploration of the life of human beings extends from collecting information on the life of a particular group, building models, making pictorial timelines, and possibly extending to futuristic inventions.

The fundamental needs of human beings are a focal point for the child's exploration, leading to many external manifestations of how people have met their needs over the ages. All needs are met through the use of the environment and thus point to the need to preserve and conserve.

The Timeline of Life (the human being as a life form)

The Black Strip (the human being is a recent inhabitant of the planet)

The Hand Timeline (the human being has powers of thinking, doing, caring)

The First Timeline of the human being (uses the hand and mind to survive)

The Second Timeline of the human being (uses the hand and mind to make better conditions)

Study of culture (the human being as hunter, agricultural, urban, global)

Details of culture (economics, food production, the arts)

- Language

The concept of affixes is explored by means of cut-out letters in different colors. The root is made visible by changing the parts of the word that are different to a different color. The affix is of course made visible as well.

Language commands associated with parts of speech make the abstract visible through an activity that exemplifies the function of the part of speech. Interpretive reading cards furnish the child with opportunity to understand what is read through movement and interpretation of passages from literature.

- Mathematics

Shapes exist in the natural environment. People have noticed, abstracted, and named them. Here is a box of sticks and you can build plane figures and examine their parts,

some common to all and some unique to the shape. Here are solid figures as well. You can build these and examine their parts. Notice that the faces of the solid figures are in some cases plane figures.

The decimal system is explored through the use of sensorial materials that reveal the abstract concepts. What might be a subject for memorization becomes a subject understandable because the concepts can be manipulated.

Cosmic Education: Assisting the Work of the Hand

One point that has been established is that the work of the hand is supportive of the development of the child's intelligence. There is no question about the significance of the hand in the process of development and the child's adaptation to life as a human being in the universe. One needs now to discuss how to make possible the work of the hand for a child in the second plane of development.

What are some of the considerations? The following are indicative of what an adult needs to do in order to best promote the work of the hand in the elementary years.

- Allow for child's work in midst of the social group (home, school)
- Acknowledge the importance of individual and group work
- Be aware of and knowledgeable of the content of the work
- Present the possibilities of work to the child
- Allow and encourage independent choice of work by the child
- Provide enough time for child to work
- Allow for child's work in midst of the social group.

At Home. The child at home is functioning as a member of the family. In different situations, the work possibilities for the child as part of a family differ. It is not possible here to explore all the varied work of the child in the home. However, the child needs to be a part of family life in order to adapt to life in a social community.

The period of childhood is the time when the inner dictates of the child to work and to persevere serve the process of development.... Coordinated movement is essential to the work of the hand and in turn results in coordinated thinking.

What work could the child do? The child can participate in and take increasing responsibility for those jobs that allow the child to bring their bodies and manual skills under control (setting the table, raking leaves, cooking). The child can help with planning necessary for family life (grocery lists, menus, itinerary for a trip). As the child matures, the child can become knowledgeable about financial considerations.

The child in the home needs space and time to work. Depending on the child's age, this can range from a simple table and chair for drawing to a work bench for carpentry. A child may work for a matter of seconds/minutes, another for minutes/hours. Consideration should be given to the rhythm of the child's work. Interruptions in their work should be minimized. Routines are helpful.

Practical life activities carry over from home to school and community. The support of parents should be elicited in helping their children learn practical life knowledge at home and become competent in caring for their personal needs. This knowledge carries over to activities outside the family. It is important to note that care of the self with regard to nutrition and physical activity is an important part of home life with regard to the development of the child.

At School. The school day has a routine and schedule that is necessary for the comfort of the teacher and students. However, this routine and schedule should be carefully considered in light of the essential need for an environment suitable for the development of the child.

It is typical for people to be more alert and focused in the morning after a night's rest. Therefore it would be prudent to keep this in mind when scheduling the day. People often arise in the morning with very definite ideas about what to accomplish. The less interference that exists to thwart these resolutions, the better the work choices. That is why it is recommended that the teacher prepare lessons to start the day, but choose which lesson to give depending on who is available and has not chosen work already. Lessons may also be scheduled for particular groups, provided they are given advance notice.

If there are scheduled activities that children must attend, they are best scheduled other than first thing in the morning. The fewer "must attend" scheduled activities, the better the possibilities for the child's work.

Acknowledge the Importance of Individual and Group Work

Children in the second plane of development often choose to work with others. It seems that the younger they are, the more they tend to group together whether for work or for association. Therefore, it is advisable for work to be available for the children to work side by side. Work should also be available that allows the children to collaborate. Each child does a part of the work prior to the final assembly of the work. Older children may choose to do individual work or collaborate on group projects.

Because of the societal nature of the human being, it is essential to present collaborative skills to the child. Lessons, even if the work is later individual, are therefore given most often to groups of children. Some lessons may need to be represented individually or to a subset of the original group. Also, when handwork is involved, group lessons may need to be supplemented with individual attention. However, in a school setting, children learn from each other, especially in the area of handwork. "I can show you how to do that" is often heard in elementary classrooms. Therefore, it is recommended that lessons be given in groups to maximize the exposure for each child for various activities and to give each child a better chance of recognizing who can help them or who they can help.

Be Aware of and Knowledgeable of the Content of the Work

The content of the work of the child is governed by Cosmic Education with an understanding that Cosmic Education includes the development of necessary skills to access information in present day society. Another way of saying this is that the intellectual life and the practical life of the child must be simultaneously addressed so that the intelligence and skill development of the child be served.

For this reason, it is important to maintain an individual child record that details the lessons of Cosmic Education. What are those elements that must be presented to the child in order to best facilitate adaptation to the universe? Here it is important to say that not all lessons that are presented to the child result in the child's individual handwork at the moment. It is recommended to rely on presentation and representation over the course of the six years in order to stimulate the work of the child. Not all can be explored in these six years but the foundation for lifelong learning has been laid. The individual child record should be analyzed periodically for lapses in delivery of Cosmic Education, as well as lapses in skill acquisition.

In addition, practical life activities that show the child how to manage in their environment need to be present in terms of taking care of the environment. For the elementary child, these activities include taking care of personal needs (eating, drinking, cleaning up after oneself, blowing one's nose), taking care of personal effects that affect others (hanging up clothes, keeping work tidy, putting away work), participating in social activities (how to receive a lesson, how to ask for help, how to give help, how to conduct a meeting, how to participate in a meeting). In any given day, the time spent in practical life activities should be examined in relation to the overall goals of the child to have received a Cosmic Education.

Present the Possibilities of Work to the Child

We have seen that the child not only needs something interesting to do but also likes to be shown exactly how to do it. Precision is found to attract him deeply, and this keeps him at work. From this we must infer that his attraction towards these manipulative tasks has an unconscious aim. The child has an instinct to coordinate his movements and to bring them under control. (*The Absorbent Mind* 179)

There are several practical ideas to be drawn from this passage.

- The child needs something to do.
- The child needs to know exactly how to do it.
- The child keeps at work because of precision of presentation.
- The child works from an inner dictate to coordinate movement and bring their bodies under control of the mind.

It is not enough that the child be presented with key ideas regarding the universe and its furnishings. Since the child needs something to do, how to do this needs to be presented as well. Further it is not enough that the something to do be presented but that “exactly how” be presented. The Montessori materials are designed to follow these ideas.

It is the striving to do the work precisely and exactly that keeps the child at the task. If magically all could be dumped into a pot and the desired result achieved, then attention and persistence would not be needed. In fact, the child has no need to build the pink tower with the ledge all around the same in order to experience a sense of dimension. But the sense of dimension is heightened by the order achieved when the ledge is the same all around. One has to give the child something to strive for or the quest is rendered less meaningful. Attention wanders.

The period of childhood is the time when the inner dictates of the child to work and to persevere serve the process of development. These dictates are to be respected and given room to be fulfilled. Coordinated movement is essential to the work of the hand and in turn results in coordinated thinking.

Here is the time to speak about the need for a complete environment with materials in good repair. If the materials are inadequate, then it becomes difficult if not impossible to show the child exactly how something is done. Closely related to the environment is the prepara-

tion of the teacher. The teacher needs to be well-versed in exactly how to do an activity. While one might excuse oneself from time to time from careful preparation, it is doubtful whether the teacher fulfills their duty to the child by frequently asking forgiveness for not being prepared. In fact, the reality is that we do not do very much of what we have not prepared. And that may be the bigger problem.

Allow and Encourage Independent Choice of Work by the Child

Independent choice of work is an issue that deserves close attention. Given the dictates of accountability to the child and parents, what is the teacher to do? Some children choose to do “nothing.” Some children choose “nonchallenging” work. Some children are “lesson” addicts.

The child must learn by his own individual activity, being given a mental freedom to take what he needs, and not to be questioned in his choice. Our teaching must only answer the mental needs of the child, never dictate them.
(To Educate the Human Potential 7)

According to Montessori, the child should be taught according to the Cosmic Education plan. But then the child is given the freedom to take what he needs and is not to be questioned in the choice. “His own actions are what take the little one along the road to independence” (*The Absorbent Mind* 154).

What is to be done? Recognizing that the child is governed by inner dictates to work, it is the teacher’s guidance that permits the child to follow their dictates by arousing interest in the lessons of Cosmic Education. The expectation for work with the topics introduced by the lessons of Cosmic Education must be present. “This is what is done here” is the implied command of the elementary Montessori classroom. This is the command given to the child in the orientation phase of the school year and represented as needed throughout the year.

The teacher’s guidance is provided by the clear expectation for work and the clear presentations of Cosmic Education, with its associated skills. The learning occurs through the child’s activity.

Provide Enough Time for the Child to Work

The greatest obstacle that children face today is the adult who does not yet accept that the child cannot act except at an individual pace. The length of the time allotted to various components varies: making the choice, gathering the materials, setting up the process, executing the procedure, choosing to continue, putting away. Not to mention that interruptions occur at any time in the process.

But it is worth thinking about strategies that allow the child time to complete a cycle of work. Listen to what Montessori says,

If his cycle of activity be interrupted, the results are a deviation of personality, aimlessness and loss of interest. (*The Absorbent Mind* 159)

The cycle must have been completed. So, whatever intelligent activity we chance to witness in a child—even if it seems absurd to us, or contrary to our wishes (provided, of course, that it does him no harm)—we must not interfere; for the child must always be able to finish the cycle of activity on which his heart is set. (159)

It is we who must go at his pace. ... The child has his own laws of development, and if we want to help him to grow, it is a question of following these, not of imposing ourselves upon him. (161)

What are some strategies?

- Daily schedule as unregimented as possible
- Habit of starting on time to provide the structure for the freedom
- Uninterrupted work time of sufficient length
- Planning so that children are cycled into lessons on a regular basis
- Planning so that children cannot have a lesson whenever

- Possibility of various activities that can be done whenever, especially when at “loose ends,” not always to be solved by the teacher
- Lessons on keeping track of what needs to be done and subsequently choosing work
- Lessons/guidance on what to do if cannot make a choice, not always solved by the teacher
- It is fine to reflect; the choice may follow

SUMMARY

What is the significance of the hand for the elementary years?

- The child in the second plane of development needs to become adapted to life in the universe and thus needs to be assisted in gaining access to knowledge of the universe and its furnishings.
- The hand is a tool of the mind, instrumental in building the intelligence.
- The human being learns by personal activity and the hand allows the execution of activity.
- Using the hand takes practice and so the hand must be allowed to work and make mistakes.
- Using materials (tools for study and learning) takes practice and so guidance on how exactly to use these materials must be given.
- The child in the elementary years has an inner dictate to seek the reasons for things and exploring how things work with their hands satisfies this need to know.
- The child needs time to perform activity and therefore needs to be in a prepared environment that allows as much time with the fewest interruptions possible.

- Creativity emerges when the intelligence guides the hand to express the thoughts of the human mind.

The child is guided to a life described by Maria Montessori. "They did what they liked best to do, having acquired an intense interest which transformed and ennobled them (*To Educate the Human Potential* 123).

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