

IMPLEMENTING ELEMENTS OF MONTESSORI PEDAGOGY IN PRESCHOOL EDUCATION

Mihaela Molodeț

Kindergarten No. 11 Alba Iulia, Romania

Abstract. Over the last decade, educational alternatives have been fascinating more and more educators and parents. Perhaps the ones that have revolutionized the education to the greatest extent due to their shift of focus were Montessori Pedagogy and Waldorf Education. According to Maria Montessori, the child has a great potential that develops to the extent to which it is stimulated and respected. Being respected, it will respect in turn the others, and when the needs of the child are fulfilled, it will develop empathy and solidarity, the sense of community, the pleasure for concentration and work, the ability to choose, to make decisions and to be creative, the ability to be calm and disciplined, autonomy and independence, the joy of learning. By integrating elements of the Montessori educational alternative into the educational plan of the preschool curriculum within a two-semester experiment, the present work aims at establishing whether by respecting the freedom of movement and the choice of work materials, as well as the creation of an active, already prepared environment, the kindergarten turns into a place and time where children come with enthusiasm, participate with interest throughout the day's program, thus becoming calmer, more orderly, happier, or not. The basis for comparison between the experimental group and the control group were activities on experimental domains and freely chosen activities and games.

Keywords: preschool education; educational alternatives; Montessori principles

"I have spent my whole life searching for the truth. By studying children, I have examined human nature at its origin, both in the East and in the West. Although forty years have passed since I began my work, childhood still seems to me an inexhaustible source of revelations and, let me say, of hope. "(Maria Montessori," The Discovery of the Child ", pg. 42)

According to Maria Montessori, the child has a great potential that develops to the extent to which it is stimulated and respected. Being respected, it will respect in turn the others, and when the needs of the child are fulfilled, it will develop empathy and solidarity, the sense of community, the pleasure for concentration and work, the ability to choose, to make decisions and to be creative, the ability to be calm and disciplined, autonomy and independence, the joy of learning. According to Maria Montessori's experience, these characteristics represent the portrait of a normal child whose basic needs have been satisfied.

Montessori principles, methods and materials were not invented all at once, they appeared based on the results of their's inventor experimental research. The founder of this education, Maria Montessori, was a pioneer in the field of early education because she proposed a complex system that included a theory of education, a pedagogical system and an original material basis. Her work is unique for the 1900s, a period of time when the field of education was poorly developed, but current scientific studies certify the validity of this method. The system created by her has been applied and improved on all continents for over 100 years now. Nowadays it is applied in public and private schools or taken over at home by many parents who guide themselves, in daily education, taking into consideration the following principles of Montessori pedagogy: absorbing mind, sensitive periods, child-centered education, competent child, guided by self-interest; education based on intrinsic motivation; the educator is a guide and not an authority in the relationship with the child; each child develops at its own pace; the rules for the functioning of the class are few, but largely respected; the child works, it does not play; learning from colleagues and in context is essential; movement and thinking develop together; the class is organized according to the logic of a house; each thing is in order and has its place which is well defined; specifically designed educational materials; grace and courtesy lessons on the rules of behavior in society; working individually or in small groups, with educational materials, according to children`s age.

As a result of numerous experiments and observations, Maria Montessori has created an educational environment in which children freely choose their materials that satisfy their inner needs, according to the sensitive periods they are going through. This environment focuses on the child and its interests, the independent activity consisting of 80% work in the classroom and 20% activities directed by educators.

A Montessori class attracts attention due to the following characteristics:

- simple and welcoming;
- beautiful, clean and in order (from this external order, where each material has its dedicated place, it is desired to reach a mental order);
- a calm atmosphere, based on respect for oneself, for others and for the environment;
- the child's freedom to choose and manipulate concrete objects, through which they learn in fact abstract concepts;
- three-hour cycle of activities (no interruption), according to the wishes of each child;
- the teaching is individual, there is no competition, there are no tests, rewards or punishments, the best reward being the self-satisfaction when doing something);
- low and open shelves, furniture adapted to the dimensions of the small children;
- sufficient space for the children's freedom of movement;
- working with hands;
- variety of textures and colors, natural materials;
- plants and elements in nature;

- guidance of the educator (the educator is trained in Montessori pedagogy by the International Association Montessori-AMI, being supported by an assistant);
- classrooms gathering children of mixed ages and grouped in periods of 3 years (0-3 years, 3-6 years, 6-9 years, 9-12 years); these mixed age groups have the advantage that the older ones help the younger ones, and the latter can learn a lot by observing the advanced ones.

"The first step that an educator, who intends to become a Montessori educator, must take is to prepare oneself [...] one must keep one's imagination alive; while in traditional schools, the educator sees the immediate behavior of the children, knowing that they have to take care of them and pay attention to what they teach, the Montessori educator is constantly looking for a child who is not there yet [...] must have the belief that a child will reveal itself through work [...] The educator must believe that this child in front of one's eyes will show its true nature when it finds that activity that attracts it. So what does the educator have to look for? The moment when one child or another will begin to focus. At this moment, one must devote one's energy and the child's activities will change from one stage to another [...]" (Maria Montessori, "The Absorbent Mind", p.258)

The remarkable results obtained within a short timeframe, as well as the meeting with the educators and the children from the kindergarten "Montessori Kinderhaus Cluj" (June 2017) were the starting point in conducting the experiment of the following school year 2017-2018, aiming at integrating, into the traditional preschool system, elements of the Montessori educational alternative, an alternative that can also be called *education for freedom*.

The experiment carried out for two semesters consisted of applying elements of the Montessori pedagogy in the traditional pre-school education in order to determine their efficiency in the harmonious modeling of the preschooler's personality.

The objectives of the research were:

- selection of elements from the Montessori educational alternative and their integration into the context of the traditional preschool curriculum;
- familiarizing children with the use of the specific materials of the Montessori educational alternative;
- conducting activities specific to the Montessori educational alternative for the children in their first year of kindergarten, i.e 2017-2018, on the curricular areas such as Practical life and Sensory development;
- ensuring the active and interactive role of the child in the learning process and facilitating its independence and ability to choose freely what it would like to work;
- emphasizing the role of guide and observer of the educator in the personal development of the child, as well as the guarantor of a favorable working environment.

The underlying hypothesis this research was the following:

Respecting the freedom of movement and the choice of work materials, as well as the creation of an active, already prepared environment transforms the kindergarten into a place and time where children come with enthusiasm, participate with interest throughout the day's program, thus becoming calmer, more orderly and happier.

The two-semester experiment focus on applying elements of the Waldorf pedagogy and the Montessori pedagogy in the traditional preschool education, in order to determine their effectiveness in harmonizing the preschooler's personality.

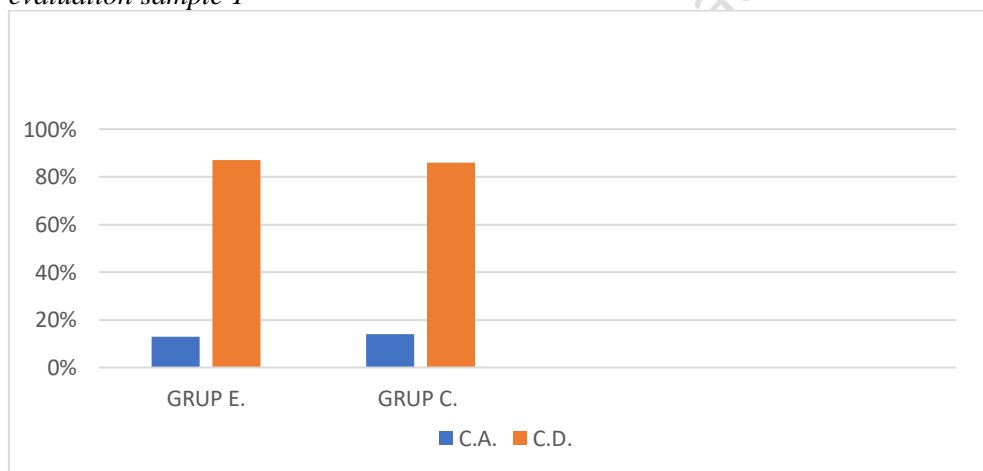
In the observational or initial stage of the experiment, the following objectives were achieved:

O1 - formation of the experimental group and the control group;

O2 – application of two samples of initial evaluation to the two groups of children participating in the experiment, in order to establish the level of knowledge, skills and aptitudes of the preschoolers before the proposed intervention, i.e. at the beginning of the school year;

O3 - observation of the preschoolers from the two groups and the completion of an observation grid for each child in the sample, in order to establish the initial level of development of the preschoolers.

Figure 1. Comparison of the results of the two groups of children in the initial evaluation sample 1



GROUP E. - experimental group

GROUP C. - control group

C.A. - attained behavior

C.D. - behavior in development

From the diagram presented in Figure 1, it can be observed that the results of the two groups of preschoolers, from the observational stage of the experiment, are very similar; this fact shows that the groups of children chosen for the present research are at the same level at the beginning of the school year in terms of knowledge, skills and aptitudes.

The independent variable, i.e. the use of elements of the Montessori educational alternative in the traditional preschool education, was introduced into **the experimental group**.

The entire instructional-formative process focused on creating learning situations in the field of two curricular areas out of the five existing ones in a Montessori class, namely Practical Life and the Sensory. The choice of the two curricular areas was based on the indications of Maria Montessori in her work "The Discovery of the Child".

Elements of the Montessori educational alternative were integrated into the educational plan of the preschool curriculum as follows:

- within the activities on experimental domains and within the freely chosen activities and games (ALA2), by organizing exercises and activities for taking care of one's own person, of the external and internal environment in which it lives, household activities, grace and courtesy exercises, motion control exercises, sensory games, language-exercise;

- within the freely chosen activities and games (ALA1), by providing children with Montessori sensory and practical materials and offering everyone the freedom to choose their desired material; by organizing small experiments at the Science center.

In the control group, the instructional-educational process was carried out according to the methodology, applying the traditional preschool curriculum. The educators from this group worked with the preschoolers conventionally, i.e. the same way they had done before the beginning of the action of experimental research, which meant the children from this group did not know the independent variable introduced during the experiment carried out at the "Group of Ladybirds" in the school year 2017 - 2018.

The last stage consists of the final evaluation of the experiment, which was conducted at the end of the school year 2017 - 2018, both in the experimental group and in the control group, and which had the following objectives:

O1 – the application of the same evaluation samples (selected for the initial evaluation) in the case of the two groups of children taking part in the study, in order to observe the progress of the preschoolers in terms of knowledge, skills and aptitudes assimilated throughout the school year;

O2 - the observation of the preschoolers from the two groups of the experiment during the final evaluation period and the completion of the same observation grid for each child in the sample, in order to see the level of development of the preschoolers at the end of the school year.

In the diagram presented in Figure 2, one can observe that **the results of the two groups of preschoolers in the final evaluation are different**, the experimental group having a higher percentage of attained behaviors. This increase highlights the efficiency of the Montessori's method and of the materials with which the children in the experimental group worked. With the help of the sensory materials "The Pink Tower", "The Staircase", "The Red Bars", "The Cylinders", children manage to learn, through action, abstract notions, such as: size, length, weight, height. They not only sort the cubes according to the size criterion, small cubes and large cubes, but they also manage to arrange 10 cubes from the largest to the smallest, which is also the task of the evaluation test - to stick the 5 dolls from the largest one to the smallest one.

Figure 2. Comparison of the results of the two groups of children in the final evaluation sample 1

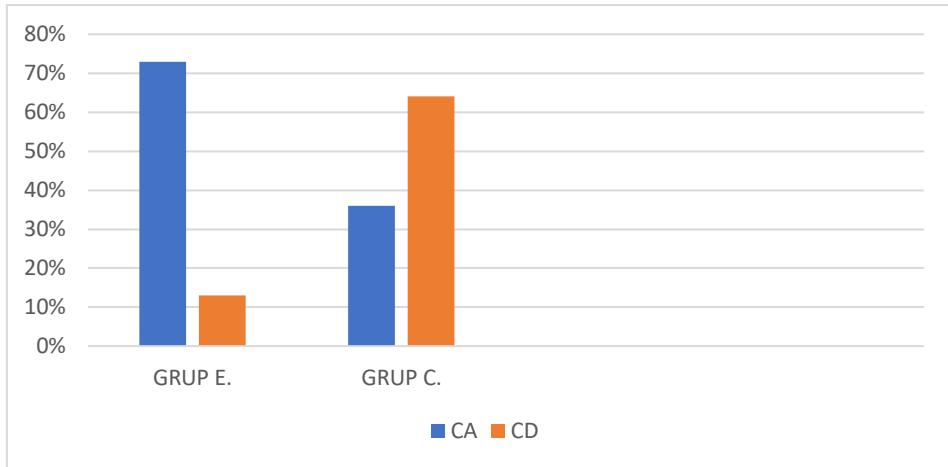
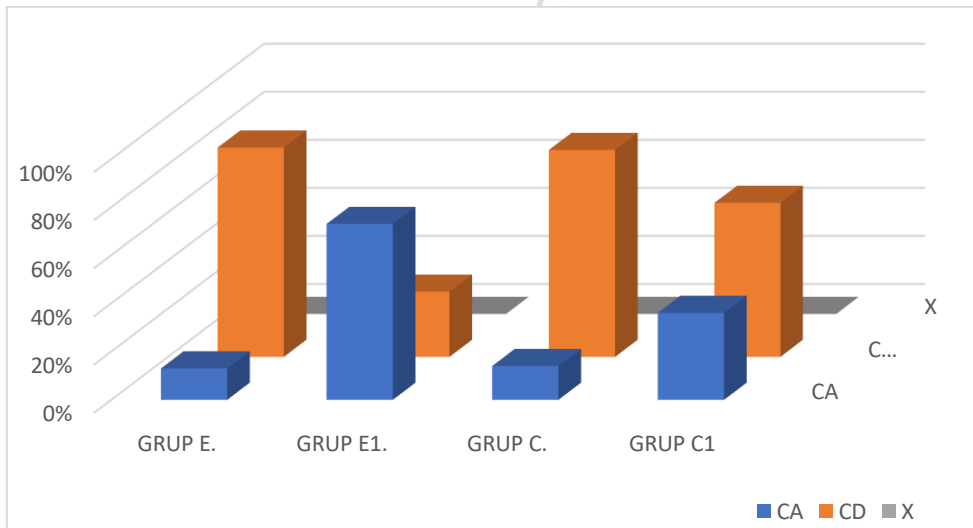


Figure 3. Comparison of the percentages between the pre-test and the post-test stage of the first evaluation sample in the experimental and control group



GROUP E. - experimental group in the initial stage

GROUP E1 - experimental group in the final stage

GROUP C - control group in the initial stage

GROUP C1 - control group in the final stage

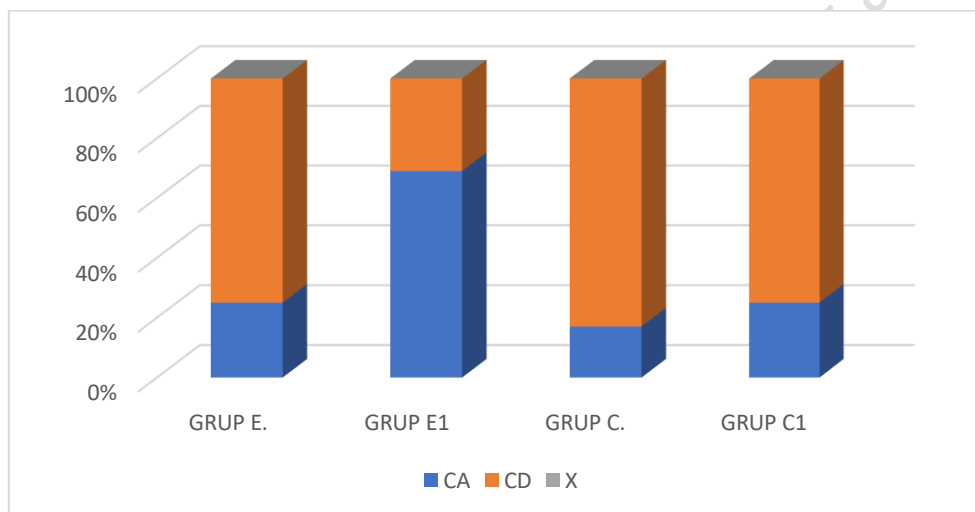
C.A. - attained behavior

C.D. - behavior in development

X - absent behavior

In this diagram, one can see **that the experimental group achieved a better progress in the results of the evaluation test "Each one in its place"**, where the task was to order the dolls from according to their size, from the biggest one to the smallest one. In comparison to the beginning of the school year, i.e. to the initial stage of the experiment, both groups of preschoolers made progress, but the much greater progress of the children in the experimental group demonstrates the efficiency of the method and materials used in the Montessori educational alternative.

Figure 4. Comparison of the percentages between the pre-test and the post-test stage in the case of the second evaluation sample in the experimental and control group



In this diagram, one can observe that the experimental group achieved a better progress in the results of the evaluation test "Find my pair!", where the task was to match the ice cream cones which were the same in colour. The significant progress of the children in the experimental group is due to the complexity of the materials specifically designed and used in the Montessori educational alternative.

In the present case, the sensory materials "Color Cards" and "Colored Men" proved to be effective not only in learning colors, but also in perceiving color shades. The task of the second evaluation sample was to match ice cream cones to 5 shades of green. Most of the children in the experimental group not only managed to complete the task successfully, but they even stuck them gradually (from the lightest green to the darkest green).

The results from the experiment presented above point to the following **conclusions:**

- ✓ the final part of the experiment indicates the fact that the preschoolers of the experimental group obtained better results in the final evaluation tests and had a better evolution regarding the development of their fine motion skills,

health and nutrition, ability and attitudes in learning (curiosity, interest and initiative), cognitive development, exploration and understanding of the world;

- ✓ the greater progress of the experimental group that can be observed in the interpreted diagrams is due to the complexity of the Montessori materials that were used throughout the experiment and, at the same time, to the principles of the Montessori pedagogy which were applied during the research period;
- ✓ the Montessori pedagogical materials used by children led to a positive change in their behavior, confirming thus the research hypothesis, namely that by respecting the freedom of movement and choice of work materials, by creating a well-prepared educational environment and by learning by action, children's interest is stimulated and they participate with more enthusiasm and were more attentive to the activities organized in groups or individually;
- ✓ the manipulation at preschool age being decisive, the pedagogical materials specifically designed by Maria Montessori encourage the children to learn by action because the hand is the instrument that stimulates the development intelligence;
- ✓ by respecting the characteristics of these materials (aesthetic, adapted to the sensitive periods of the children, sensory and having a very precise purpose) preschoolers are stimulated to carry out exercises with great concentration and attention, which influences their inner development directly.

“Montessori discovered childhood, she discovered that the child wants to learn, that it is eager to learn, to know the world, to explore it and if this desire fades away, it means the child was not offered the necessary help at the time and in the way it needed it. ” (I. Sulea-Firea, Introductory study on the work of Maria Montessori, "The Discovery of the Child", pg. 31).

References:

- Cotte, Delphine Gilles, "Montessori la tine acasă" ["Montessori à la maison"], "Gama" Publishing House, Iasi, 2017.
- Diederichs, Gilles, "Educația Montessori acasă" ["L'enfant arc-en-ciel: La pédagogie Montessori à la maison"] "Litera" Publishing House, Bucharest, 2017.
- Herrmann, Eve, "100 de activități stimulative Montessori" ["100 activités d'éveil Montessori"], "Gama" Publishing House, Iasi, 2015.
- Herrmann, Eve, "100 de activități Montessori pentru descoperirea lumii înconjurătoare" ["100 activités Montessori pour découvrir le monde"], "Gama" Publishing House, Iasi, 2016.
- Montessori, Maria, "Descoperirea copilului" ["The Discovery of the Child"], Didactic and Pedagogical Publishing House, Bucharest, 1977.

Montessori, Maria, "Secretul copilăriei" ["The Secret of Childhood"], "Vreamea" Publishing House, Bucharest, 2015.

Montessori, Maria, "Copilul în familie" ["The Child in the Family"], "Vreamea" Publishing House, Bucharest, 2015.

Montessori, Maria, "Mintea absorbantă" ["The Absorbent Mind"], "A.P.A." Publishing House, Drobeta Turnu Severin, 2006.

Poussin, Charlotte, "Pedagogia Montessori explicată părinților" ["Apprends-moi à faire seul: La pédagogie Montessori expliquée aux parents"], "Gama" Publishing House, Iasi 2017.

Voiculescu, Florea, "Metodologia cercetării" ["The Research Methodology"], "Didactics" series, Alba Iulia, 2013.

***, "Repere fundamentale în învățarea timpurie și dezvoltarea timpurie a copilului de la naștere la 7 ani" [„Fundamental milestones in early learning and development of the child from birth to 7 years"], "Vanemonde" Publishing House, Bucharest, 2010.