



CLASSICAL SYSTEM OF SENSOR EDUCATION M. MONTESSORI IN THE SYSTEM OF STEAM EDUCATION

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<p>Received: February 8th 2023 Accepted: March 7th 2023 Published: March 10th 2023</p>	<p>This article discusses the basic concept and importance of using the Montessori program in order to further develop the sensory abilities and thinking of children of early preschool age, as well as the advantages of zoning educational institutions under the M. Montessori program</p>
<p>Keywords: sensory education, preschool education, self-realization, free education, pedagogy</p>	

In the late nineteenth and early twentieth centuries, the pedagogical concept of Maria Montessori was developed. M. Montessori was not a pioneer in the development of the organs of perception and senses in children. Using the experience of the French doctor and teacher Edouard Seguin, Maria Montessori began to develop her own concept and vision of this aspect. Seguin, at one time, qualified on children with developmental disabilities and developed his own system of exercises that contributed to the development of children's perception and teaching them routine skills. Moreover, such famous philosophers as Jean Jacques Rousseau and Johann Heinrich Pestalozzi, in their works, considered the role of the development of the sense organs in the educational process in children.

The founder of the scout and guide movement, a contemporary of Maria Montessori, Robert Baden-Powell (1857-1941), argued that in order to master and understand the world around us, the child needs practical experience of interacting with objects. This concept has become the foundation in the theory of active learning. Moreover, he was convinced that the system of standard education in the form of orders and following clear established rules should be replaced with the natural need of the child to gain his own experience, and teachers, mentors can create a more fundamental basis for the development of the child. Hard and exhausting education, according to Baden-Powell, is long outdated and requires the formation of new views and concepts.

Maria Montessori got her start working with abandoned toddlers who lacked adequate sensory stimulation due to a lack of toys or proper development that amounted to minimal basic care. In this regard, Maria clearly proved that changing the conditions for the existence and development of a child significantly affects the level of their abilities. This aspect has also been proven at the level of neurophysiology, in the course of research to date.

In the course of her teaching activities, Maria Montessori relied on the main task, namely the upbringing of the child, taking into account his needs, which contributes to the correct self-expression, self-education and self-education. Also, she singled out several psychological factors, namely the development of sensory education, which was carried out with the help of a properly organized environment and methodical classes with didactic material. Another important factor is the activity of the child and the ability of self-realization in the course of education. However, preschool organizations, according to M. Montessori, are a kind of "laboratory" for studying the mental state of a child's activity, where the teacher acts as an observer who carefully plans the course of the lesson, didactic material and is able to determine the results achieved or changes in behavior with maximum accuracy. and development of the child. The leadership, in turn, is based on the basis of autodidacticism, namely, the exact following of the instructions of the teacher, but the possibility of choosing the proposed activity. The organization of didactic material allows the child to independently find his own mistakes, and correcting mistakes requires attention, observation and concentration, which trains the child's ability to self-discipline and responsibility.

Maria Montessori's approach to pedagogy and education was implemented in many kindergartens in the twentieth century. The experience of raising and educating children according to the system of Maria Montessori is widely presented in the works of T.I. Afanasyeva, where the basic methodological approaches to the introduction of free education in preschool organizations were analyzed. The monograph by B. Esser and H. Vilde also described the experience of free upbringing of children in Germany and presented the results of monitoring teachers working according to the M. Montessori system. Moreover, since 1907, a special program "Montessori Houses" has been functioning, in the context of which scientific research and practical work are carried out, and the results of research are widely presented in the monographs of E.A. Hiltunen. However, it is worth noting that the specifics of M. Montessori's

upbringing is not the only system that promotes the views of the free upbringing of children. For example, the views of L.N. Tostoy, who opened a special school in Yasnaya Polyana, are also close to the views of M. Montessori, where the concept of free and fruitful creativity of the child was realized with the help of teachers. According to L.N. Tolstoy, a child in its essence is the highest form of manifestation of perfection, rather than an adult, an accomplished person. This school was presented to society as a kind of pedagogical laboratory, which met all the requirements of pedagogical aspects. In this school, the pedagogical process was based on personal respect and development of the child, relying on his independence and choice. Lessons were held in the form of oral conversations between teachers and students. Calligraphy, grammar, the law of God, reading and writing, as well as arithmetic, history and geography were taught here. Natural history, geography and history were presented in the form of artistic stories and demonstration of visual material.

As the study shows, the idea of free education and its implementation and implementation have repeatedly arisen in different countries in pedagogy and were presented by completely different people, which is proved by the promotion of this idea by society.

Sensory perception M. Montessori. The term "sensory education" means "sensation" and is expressed as understanding and awareness of the world. This aspect is characterized by the level of cognition of reality and the representation of the properties of the objects around us.

The fundamental concept of the development of sensory perception in children of primary and preschool age are "physiological" or in other words "sensory" standards. They imply such divisions as size, color, geometric shape, length, smell, texture, sound. Sensory education of preschool children includes teaching skills such as analysis, generalization, comparison of objects according to the above concepts. Also, it should be noted that it is at a young age that the introduction of sensory activity contributes to more pronounced thinking and high intelligence. Moreover, sensory processes are especially important in early childhood, since the ability to accurately perceive such basic standards as color, size, or other properties of objects and things in the world around us develops faster precisely in preschool age. For this reason, such researchers as N.M. Aksarina and N.M. Shilovanov, interpret the preschool years as the "golden age" of sensory development, and also emphasize the need for the formation and implementation of sensory culture in children from the first years of life.

According to modern physiological and psychological research, cognition is an active brain process, which is characterized by a purposeful determination of the properties of an object in order to cognize and study it. L.A. Wenger, in his works, argued that at the age of two or three years, the child needs to introduce sensory development in the form of teaching him the elementary relationships of objects, namely the difference in shape, color, space, and so on. This study implies an understanding of the psychology of the idea of classical sensory education in preschool children, namely the need to rely on the successful experience of applying this concept in the course of work with the fundamental goal of forming generalized methods for studying the properties of objects and objects, as well as defining them as a "base" generally accepted sensory standards.

The main objectives of the experiment are to study the languages of practical tasks, conditions, as well as ways of effective learning through the method of checking and understanding the shape of objects.

Throughout the history of teacher education, it is sensory education that has been the main problem in the education of preschool children. Jan Comenius in his works suggested that not only visual material, but also experience in practical use, is the main and successful aspect in education. It is on our own experience that it is possible to consider the need for a full-fledged work of educating preschool children in order to form generalized methods for studying the properties and definitions of objects as the basis of generally accepted sensory standards.

The specific objectives of this experiment are that parents give the child complete freedom of choice. The slogan of the Maria Montessori system is "Help me do it myself." This means that the goal of parents and teachers is to create all the necessary conditions for development, and the ability to direct the child to one or another type of activity and suggest how and what you can learn.

Classes are held in a special organized environment, which is divided into several role-playing areas. The experiment involves children, preschoolers, of different ages, where older children help the younger ones, who in turn are a good example. Children are taught to follow certain rules. First, the child is allowed to do things that do not require the presence of adults. This gives a kind of self-confidence and independence in their actions. Secondly, children are taught to respect each other and not interfere with the activities of other children, i.e. be quiet and not distract others from the gaming or educational process. Further, all material, namely toys or any objects that interact with the child, should be kept clean and tidy, which also motivates the child to respect other people and maintain order. Compliance with these simple rules allows children to feel confident, cultivates respect and patience for themselves and others, and also allows them to clearly defend their boundaries and not violate others.

Moreover, according to the method of M. Montessori, it is necessary to take into account the following aspects:

In preschool organizations, the group should be divided into several zones, where each will be equipped with appropriate didactic aids. This approach to "zoning" helps teachers maintain order and properly organize the workplace, and children, in turn, more easily perceive the proposed material.

Let's take a closer look at the possibilities of "zoning":

Practical orientation allows the child to master the simplest life skills. For example, a child aged one to three tries to clean the floor with a brush, unfastens buttons and locks of various sizes and shapes, learns to dress dolls or

collect pyramids. Children ages three to eight learn how to brush their teeth, dress themselves, wash or chop vegetables using safe appliances.

The sensor zone implies the presence of objects that differ in color, shape, weight and size. This includes games with identical or similar content. For example, a lid of different sizes for bottles or jars that develop fine motor skills, as well as mental activity, namely memory and attention.

The mathematical zone includes didactic aids and material that introduces the child to the simplest mathematical symbols and geometric shapes. Children are offered different objects of different geometric shapes. Older children learn to count using wooden boards with numbers or sets of numbers that provide an initial understanding of fractions. Here you can observe the formation of perseverance and abstract thinking.

The language zone is a kind of guide for the assimilation of sounds, letters and syllables, in order to expand the vocabulary. Textured letters are needed here, as well as pictures that define this or that sound. For example, books or first copybooks, as well as sets of printed and capital letters for older preschool children. This area helps the child learn to read and write.

The space zone is a guide to the Universe, the environment around us, nature and weather phenomena, as well as the culture, traditions and customs of different peoples of the world. This area allows the child to develop comprehensively. Children learn to express themselves, express their own opinions and show interest in the world around them.

In conclusion, it should be noted that Maria Montessori's system of sensory education is popular in many countries of the world; this didactic material, teaching methods, methods of developing unique abilities, as well as a free education system is the fundamental basis for the implementation and creation of more advanced systems for teaching and educating children of primary and secondary preschool age.

However, it should be noted that the system of Maria Montessori is ideal for the development of certain mental functions, namely sensory education. Other higher mental functions, such as voluntary attention, should be developed using certain exercises, relying on a system of purposeful education.

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