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| Research Article

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Psychological Foundations Of Sensory Learning In The Maria Montessori System

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Abstract: The article examines the psychological foundations of sensory learning, which is the central element of Maria Montessori's pedagogical system. The main focus is on how sensory perception helps children develop cognitive and psychomotor skills, as well as how this approach contributes to the formation of basic competencies through interaction with the environment. The article analyzes important aspects of sensory learning from the point of view of modern psychology and shows how the Montessori method can be used to develop sensory abilities in children.

Keywords: sensory learning, Montessori method, cognitive development, psychomotor science, educational psychology.

Introduction

Sensory learning is one of the key aspects of Maria Montessori's pedagogical system, which is aimed at developing a child through active perception of the world around them. Sensory materials used in the Montessori classroom help children develop different types of perception — from sight and hearing to touch and smell. An important goal of sensory learning is to develop not only cognitive skills, but also a holistic perception of the world, which is the basis for more complex forms of thinking and action (Montessori, 2015).

The theoretical basis

The basis of sensory learning in the Montessori system is the idea that children learn through direct experience and perception. Psychological research shows that young children perceive information best through sensory interaction with the environment. In this context, the Montessori method provides children with the opportunity to actively explore the world, developing their

sensory abilities (Piaget, 1969). This supports their cognitive and psychomotor development, as well as helps them form an idea of cause-and-effect relationships (Vygotsky, 1978).

Methods

The study involved 50 children aged 3 to 6 years who study in educational institutions using the Montessori method. Also, 10 teachers with at least 5 years of experience in the methodology were included in the study.

Observation and testing methods were used for the study. Children performed tasks aimed at developing sensory skills, while teachers recorded the results of their performance and assessed the level of development of various aspects of sensory perception. Additionally, interviews were conducted with teachers to identify their observations and assess the role of sensory materials in the learning process.

Results

Sensory materials such as rough and smooth boards, weight and length discrimination blocks help children develop skills to distinguish objects by shape, size, texture and weight. The study revealed that regular use of sensory materials improves cognitive processes such as memory, concentration and the ability to compare (Lillard, 2007). Children working with sensory materials showed a high degree of independence and a desire for further exploration of objects.

Cognitive processes and sensory perception

An important finding of the study was the confirmation that children who actively interact with sensory materials show a higher level of cognitive development. The psychological aspects of sensory learning include enhancing the ability to concentrate and think logically. Teachers note that children who develop sensory perception more easily solve tasks that require distinguishing small details and analyzing information (Montessori, 2012).

Discussion

Sensory learning in the Montessori system is based on fundamental principles of developmental psychology, such as Piaget's theory of cognitive development and Vygotsky's theory of social constructivism. Piaget argued that sensory perception is the basis for all more complex cognitive processes, such as logical thinking and spatial perception (Piaget, 1969). In the Montessori system, this principle is implemented through the purposeful use of sensory materials that help children structure their perception of the world around them.

Sensory learning is also related to Vygotsky's concept of the zone of proximal development (Vygotsky, 1978). The teacher in the Montessori classroom plays the role of an observer and guide, creating conditions for the independent development of the child. This approach promotes both cognitive and emotional development, as children feel supported by adults, but at the same time have the freedom to explore the world.

Conclusion

The psychological foundations of sensory learning in the Maria Montessori system demonstrate high effectiveness in the development of cognitive and psychomotor skills in children. Sensory materials and a prepared environment create conditions for a natural and holistic perception of the world, which is an important basis for further education. Further research may focus on specific aspects of the impact of sensory learning on various cognitive processes, such as spatial thinking and abstract perception.

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