

The Importance of Neurolearning in Childhood

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Neurolearning as a science is concerned with promoting education from the point of view of how the brain learns, recognizing in this organ-specific areas that can be stimulated. This implies knowing and reflecting about cognitive functions (memory, attention, language, and perception), in order to devise learning strategies according to the specificities and educational difficulties of each student.

Each person has their own way of processing knowledge and learning, which varies according to their set of needs and their neurological structure. In this way, neuro-learning contributes to the educator rethinking how to teach, and how specifically each child processes the stimuli he receives from the environment.

Learning occurs in the central nervous system, i.e. in the brain region. The organ captures stimuli coming from the environment, which through plasticity is able to make and redo new connections, thus shaping human behavior according to new skills acquired. From a cognitive point of view, recent information is aggregated into the brain so that it can be used as needed.

Regeneration of the central nervous system occurs with each newly learned behavior, and continues throughout human development, from childhood to old age. This process is part of the movement of the plasticity of the brain and is essential for the child's adaptation to the environment and the development of skills in the individual.

Neuroscience learning emphasizes the importance of experience for the construction and improvement of the new abilities, and the interactions among neurons act as modelers of these learning in the brain, strengthening the connections and neural areas more worked and stimulated by the environment.

The neuro-learning under the pedagogical bias, analyzes different teaching strategies, proposing reflections about how the knowledge is processed in the brain, in order to enrich the stimuli and learning in the classroom. This new way of conceiving the knowledge considers the cerebral functioning of the child and its handling in the capture of information. In addition, it advocates multiple and diverse intelligence and its relationship with skill enhancement.

The cognitive preferences manifested by each child through multiple intelligence are the result of the set of stimuli and learning opportunities that children experience in their social and family life.

The act of learning is permeated by a continuous process of neural networks, which means that when new knowledge is captured, transforming into learning through experience, new connections are formed between the neurons, giving rise to a new connections.

The neural connections formed from the development of new learning, permeate all the growth of the human being, because it is through these structures that new stimuli are captured, coming from all parts of the environment, in order to better adapt the individual in his relationship with the environment, assisting him in his cognitive functions as well as the acquisition of new skills. Thus, learning

is the result of a network transformation, involving links between neurons, capable of being modified with each new added knowledge.

The first years of the child's life are equivalent to moments and possibilities of growth and development. For this reason, encouraging the corresponding stimuli with the child's age group is essential for the construction of (multiple) intelligence and aptitudes in the life of this human being in formation.

Each new experience and differentiated contact with the world through stimuli provides the child with the consolidation of synaptic connections that result in the development of new knowledge and discoveries. Memory plays an active role in this process, as it registers and stores the knowledge relevant to the child's developmental phase to be rescued when necessary. In this way, the apprentice builds and broadens his repertoire of experiences according to the stimuli offered by the environment. Examples of stimuli provided to the child are:

- Improvement of oral language through storytelling and contact with different styles of texts, with or without engraving (depending on the age of the child);
- Provide for the child the contact with different objects, different textures, different sizes, and shapes so that through tactile ability, he can recognize and identify the type of material;
- Expose the child to different auditory stimuli, such as conversations with the mother or caregivers, sounds of nature, musical instruments, etc;
- Stimulate their movement and socialization capacities, through the encouragement of outdoor recreational activities, sports or typical regional dances;
- Develop pedagogical activities with the child (at home or at school), always taking into account the sensory, motor, emotional, linguistic and socio-cultural aspects in which the child is inserted.

The child, before the first year of life, is able to recognize objects and places by their characteristics. This occurs due to the expanding development of their optimal capacity. It is for this reason that the supply of sensory stimuli for the child is so important, that in this period it is very concrete.

The baby's learning starts from the observation of objects and people in which they are referenced for him, like his parents, for example. Through his optical ability, the child follows the environment and the people with the eye, thus building affinities and interests, essential to continuing to motivate him in this process of knowledge and learning.

Because the child's brain is in continuous growth and development, it presents a more plastic and sensitive learning trait compared to an adult's brain, called sensitive periods, in which contact with environmental influences is extremely important. For this reason, the effective work of an education based on stimuli acts as a facilitator in the development of new learning connections.

As the child's brain develops, neural connections become more and more intensified by working with sensory stimuli. This creates more and more specialized skills, enabling this child to perform various functions in the environment.

The plastic brain, during childhood, acts in an agile and effective way according to the experiences offered to it, forming neural connections that cover different areas of human intelligence, such as sensory, motor, cognitive, affective, emotional and behavioral functions. These functions provide the child with the performance of multiple learning and responses to the environment.

During early childhood, the child's brain is more receptive and sensitive to change. This is a period of intense development, in which skills and knowledge are acquired through experience, preparing the brain for the acquisition of increasingly complex and challenging learning.

A child who is not exposed to the stimuli provided by the environment may not adequately develop the abilities and behaviors inherent to his/her age group, which results in the construction of fewer neural connections in certain cognitive areas, as well as the presence of

potential learning difficulties to the detriment of the scarcity of stimuli. The family and school play a crucial role in this process by fostering learning spaces rich in stimuli and challenges for the learner.

In practical ways, learning must have value and meaning for the child, starting from simple stimuli for the most complex, seeking elements of family and social life, so that this new knowledge can add meaning and value to the student. The brain is an organ that can be worked beyond the school walls, seeking to make the most of the stimuli and incentives offered by the environment, such as observing nature, growing plants and planting vegetables, among other elements.

As the child experiences new learning experiences, his brain is reorganized to assimilate the new knowledge, modifying the neural structure and functionality, thus generating different abilities and cognitive practices in this child [1].

Bibliography

1. Silva Daniela. "Developing the Creative Potential of Children by Stimulating the Windows of Opportunity". *Novas Edições Acadêmicas* (2018): 22.

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