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SUPPORTING LEARNING PROCESSES OF PRE-SCHOOL CHILDREN. THE USE OF EDUCATIONAL KINESIOLOGY IN AN EFFECTIVE LEARNING – BE THE MASTER OF YOUR MIND

Streszczenie

Artykuł przybliża pojęcie edukacji kinezyologicznej oraz jej zastosowanie w nauce dzieci w wieku przedszkolnym. Kinezyologia edukacyjna określana jest mianem „gimnastyki mózgu”. Mózg nie jest narządem symetrycznym – każda z półkul ma inne zadania. W mózgu wypracowane zostają pewne połączenia nerwowe – ścieżki, które, często używane, ułatwiają uczenie się. „Gimnastyka mózgu” ma na celu przywrócenie zablokowanych na skutek stresu, oraz wypracowanie nowych połączeń nerwowych, po których biegają impulsy do kory mózgowej, gdzie odbywa się właściwy proces uczenia się. Stosowana jest w pracy z dziećmi między innymi w celu poprawy funkcjonowania umysłu (poprawa pamięci, koncentracji, koordynacji wzrokowo-ruchowej, czy wysławiania się, czytania, liczenia, zapamiętywania cyfr, pisania) oraz zwiększenia zdolności manualnych. Synchronizacja współpracy obu półkul mózgowych poprzez zastosowanie różnorodnych ćwiczeń wspomaga procesy nauczania oraz skuteczność uczenia się. Wykorzystanie w praktyce naturalnych prostych ruchów fizycznych jest niezbędne do organizowania pracy mózgu i ciała w celu rozszerzania potencjalnych możliwości zablokowanych w ciele dziecka.

1. Introduction

The results of scientific research have revealed that human beings utilize only 3% of their mental potential. The brain is divided into two cerebral hemispheres, the left and right one, each of them having their own functions. The left hemisphere – called logical, is responsible for short-term memory, analysis and a sense of time. Through it, grammar, spelling, and exact sciences are assimilated very easily. The right hemisphere of the brain – called creative, is very often associated with intuition and emotions. It is liable for long-term memory, mental synthesis, per-

spective and spatial awareness. As a result, each individual is sensitive to shapes and colours or is able to generalize and interpret other people's emotions. The right hemisphere of the brain processes an incoming flow of information in a holistic and integrated way (simultaneously), not making any logical analysis.

The significance of a balanced and harmonious cooperation of both hemispheres in children's everyday life and school environment in a pre-school period is tremendous as it determines effectiveness in thinking and learning. The left hemisphere absorbs data in a conscious and methodical manner, whereas its right counterpart takes in information subconsciously, creatively and intuitively. As the brain 'decides on' the domination of one of the hemispheres in processing data, it leads to the differences, for example, in reading styles. Some children read slowly but thoroughly putting together all the graphic signs in whole words, which is the task of the left hemisphere. The right hemisphere, on the other hand, concerns the holistic comprehension of images, words and sentences. In this way, children read quickly, but they may make mistakes guessing the meaning of particular words – images. It directly translates into the way children organize their learning. The brain as a whole relies on both functionality and logic as well as on intuition and imagination. In order to utilize the optimal potential of the child's brain in the process of learning, both hemispheres have to cooperate. The whole 'menu' of the hemispheres has to be made use of. If the functioning of the left hemisphere is the most vital in learning, for instance languages (grammar, rules), it is essential for children to try to draw, use colours and associations. If the domination is on the part of the right hemisphere – it is important for them to do e.g. language crosswords.

2. How to define educational kinesiology?

The whole brain-body system takes part in the process of learning. Proper physical exercises (educational kinesiology - 'the brain gym') boost the functions of both hemispheres and in this way stimulate children's brain. As moving with intention leads to an optimal learning, educational kinesiology promotes movement exercises which forward the optimal achievement of mental potential latent in each child. Particular forms of exercise, like creating shapes of letters with the child's body, using pantomime and drama, arts and crafts, exercises with the dice or the mirror, writing with both hands at the same time, writing on the forehead, writing by turns or 'lazy eights', engage the whole body, especially coordinated movements of eyeballs, arms and legs, which evenly activates both hemispheres stimulating children's body, brain and emotions at the same time.

2.1. Polysensory learning – 'Learning by doing'

An indispensable part of 'the brain gym' is a polysensory learning method – 'learning by doing'. It is significantly easier for children to remember information if

it reaches the brain through different pathways simultaneously. The more stimuli children receive, the easier and the more long-lasting it is for them to remember bits of information connected with these stimuli. Children code information visually, aurally and kinesthetically. That is why it is of primary significance to work with pictures, charts, flash cards and various other items in the process of learning. In this way, children listen not only to other pupils, but also to recorded texts or themselves; they read, write, move, mime or perform various tasks; they learn through what they have prepared, touched, smelt or felt. If children see given things, touch, taste, hear their names or see their written forms, then these young learners are able to pronounce the names of the things, associate and read them. Stimulating the brain in this pre-school period of children's process of knowledge acquisition combined with the stimulation of all the senses determines children's learning progress and their optimal intellectual development.

2.2. Mnemotechniques

Memory is a wide unrestrained concept, 'an ocean' of meanings and possibilities, and so is 'art of memory'. Memory plays a special role in the process of learning. Memory training through various exercises increases its efficiency and capacity. In the early stage of pre-school period memory training development is a cause of significant changes in the sphere of the child's psyche, as it enables the development of thinking. The more stimuli children receive through a given situation, the richer and better remembered children's experiences are. And that is possible through mnemotechniques. These are the methods of fast memorization. The techniques make use of children's imagination and associations in order to create new images that are easy to remember. In connection with fast reading and concentration exercises, the memorization techniques, e.g. 'mental glue', 'packing the suitcase', or 'hooks', empower a dynamic cognitive advancement.

2.3. Global reading

A technique that increases reading effectiveness is global reading – 'the game of reading'. Its approach assumes that children learn to read best when reading begins with a natural and meaningful text. In the early stage of reading process, children possess some intuitive knowledge about a language based on the language practice. Pre-school learning of reading should first and foremost be a kind of support in children's development, not the aim in itself. The global method is the process of learning reading, in which a word, a phrase or a sentence is recognized as a whole graphic image. A global approach to reading begins by giving learners natural, meaningful texts to listen to, look at, and memorize by sight. It affects a better understanding of the meaning, as a much less concentration and effort is put to the formal side of reading (spelling or recognizing particular elements). The exposition of whole words or sentences leads to a gradual increase of the reading field, that is,

the area which the reader takes in. Mastering the reading skill requires a constant field expansion. Due to the global method, children become acquainted with words as wholes from the contexts of given illustrations. In the course of time, they recognize these words among others.

Appropriate forms of ‘warming up’ the brain exercises (e.g. underlining appropriate numbers or letters in random rows of a particular text or crossing out right syllables) develop the visual and auditory receptors that are determinants of correct speech development, which consequently stimulates a reading process.

The basis for learning reading is the utilization of children’s cognitive development, particularly the process of noticing and memory, which facilitate the process of memorizing words and sentences, and consequently comprehending reading contents.

3. Conclusion

In the process of pre-school learning, educational kinesiology plays a vital role as it ‘intrigues’ the brain with a new material. It has been proved that thanks to educational kinesiology/‘the brain gym’, children acquire and expand their knowledge through developing and utilizing:

- concentration and attention skills as well as memory capacity
- the ability to act in the state of the full brain synchronization (activation of both hemispheres)
- methods of proper relaxation and working in a stress-free way (e.g. ‘wandering of the fly’, ‘the elephant’, ‘the bicycle crunch’ or energetic yawning)
- imagination and memorization skills
- innate intelligence
- the ability to notice and respond to movement-based needs
- creativity and self expression
- an appreciation of music, physical education and the fine arts.

In the course of pre-school learning, it is significant not to get the brain bored as everything monotonous, dull and unremarkable is rejected and forgotten straightaway. What should be done then to ‘interest’ the brain and optimize its mental potential? The key to the issue is the use of proper concentration exercises, relaxation methods, memorization techniques and the engagement of all the senses in the process of learning. Educational kinesiology functions wonderfully, so why not implementing it into school curricula on a regular basis?

Bibliography

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