



MENTAL ARITHMETIC IN ELEMENTARY SCHOOLS

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Abstract

The widespread access to the free functioning of educational institutions in our country has also led to free competition in the education system. Of course, where there is competition, research, the desire for innovation, is evident, and as a result of these studies, high quality is achieved. (Matthew 24:14; 28:19, 20) Today, the introduction of new pedagogical technologies and methodologies in the preschool and primary education system is of great importance. Mental arithmetic is also an example of such new pedtechnology. This article summarizes the importance of mental arithmetic in the hierarchy of preschool and primary school-age children and the origin of mental arithmetic and abacus history.

Keywords: Mental arithmetic, abacus, soroban, mental capacity, brain right and left hemisphere development, mind and mind activity.

Introduction

Today, reforming the education system in our independent country, especially by introducing new pedtechnology to the preschool and primary education system, has been designated as an important task to elevate the quality of education to a higher level. The work being done in this regard has already been elevated to the level of government policy in the republic. It is widely known that the role of preschool and primary education in education is insignificant. At the same time, all the abilities that exist in children gradually begin to manifest themselves in their fitness in the environment. At this age, children's brain activity works very quickly, and their ability to remember is excellent. Everything they learn is preserved in their memories. Developing children's intellectual abilities will provide a solid foundation for future scientific success and personal development. The uniform development of both hemisphere of the brain, especially in preschool and primary school-age children, improves the quality of their learning and training process. Mental arithmetic greatly helps students who have just come to elementary school in schools to cultivate their minds and minds, strengthen their memory and interest them in specific subjects. By organizing mental arithmetic courses in schools, children's attention will be focused, strengthened memory, taught a precision, self-confidence, creative thinking, hearing and observation, imagination, the development of creative thinking, and the development of creative approaches to solving any problems.

Mental arithmetic allows both hemisphere of the brain to develop uniformly. Mental arithmetic teaches complex mathematical actions to calculate quickly and easily in the brain. It is calculated



using a special device, that is, abacus. The history of Abacus and mental arithmetic originated from the culture of the Far East. Abacus mental arithmetic uses abacus images to allow students to coordinate the body's functions in the process of vision, hearing, hand-picking and brain computation, to stimulate the balanced development of the left and right brains and to create a pearl map in the brain to achieve the best development of the entire brain.

Mental arithmetic is a method of developing the mental capacity of children between the ages of 4 and 5 and 16, based on the oral accounting system, using special abakus accounts. At school age, the strongest knowledge and skills will be created, a child's mental abilities will develop rapidly, and the basis for his intellectual development will be established in the future. This method allows the brain to function in two hemisphere, making a person much more intellectually developed. Mental arithmetic is a program designed for children aged 4 to 16. This age is the most developing period of the brain. Therefore, the study of mental arithmetic during this period shows the best results. By studying this technique, a person will be able to solve any arithmetic problem, such as adding, separating, multiplying, being a square root in a second faster than using an accounting machine in a few seconds. But mental arithmetic is not only an account but also an exercise aimed at synchronizing the work of the hemisphere, synchronizing abilities, memory, attention, speech, thinking.

Mental arithmetic examples are calculated using abacus. Abacus is the oldest accounting board in mental arithmetic. It is derived from the Latin language and means "stones inside the frame." For arithmetic calculations, abacus was used in Greece, ancient Rome, as well as in India and China from about the fifth century BC. This modern technique is a fast and effective tool based on the development of both hemisphere of the brain. *According to some sources, the calculation using mental arithmetic and abacus originated 5,000 years ago and is used in 52 countries around the world. It is even included in the compulsory school education program in Japan and China. The homeland of mental arithmetic is Japan. But as we noted, many centuries before that, 5,000 years ago, a computing machine used in this methodology was invented in China. It is also called a soroban. In the 20th century, mental arithmetic was also widely used in many Asian countries. By the 1990s, the Japanese, using soroban, developed a holistic system for the development of consciousness. Today, this method is taught not only in Japan but also in China, Malaysia, the United States, Canada, Australia, and other countries.*

Mental arithmetic means calculating a variety of mathematical actions in the brain in a short time, mainly from adding them, gradually separating them and then gradually separating them, such as multiplication and division. It helps calculate easily using certain formulas, not only in the brain, but also with the help of fingers, brushes. Mental arithmetic is a unique method of developing intelligence based on the simultaneous rapid movement of the right and left fingers of the brain and the left hemisphere. The following process occurs in the brain of a child engaged in mental arithmetic. In the process of performing a simple action on the abacus, the left part of the brain responds to the performance of computational action in neurons, while the right part is for motorcycles, that is, controls hand movements. And the middle of the brain keeps the numbers heard under their control. Therefore, children who engage in mental arithmetic work together on the right and left hemisphere of the brain. The children involved in this exercise begin to master not only mathematics but also other subjects perfectly. Their memory is strengthened. There are a number of teaching aids in teaching mental arithmetic, which are designed primarily based on a child's age, which means that they gradually become more complex. It is first represented by



different shapes, and then the numbers, formulas are reflected. It is known that the left hemisphere of the brain tends to be rational, analytical, to completely control a person. The right half of the brain is a source of emotions, sensitivity, artistic sketches and creativity. The interaction of these two hemispheres elevates the result of spiritual advancement to a high level.

Experts note that a student who masters mathematics well has a high level of analytical and logical thinking. Mental arithmetic also helps to study mathematics at a high level in all subjects. It develops the ability not only to solve examples and issues but also to quickly make decisions, discuss and negotiate in various situations in life, and to do their work gradually. Mental arithmetic training develops the synchronous work of two hemisphere, which has an ibobiy effect on the ability to concentrate and remember, as well as the ability of children to perform many tasks at the same time.

As mentioned, in recent years, reforming the preschool and primary education system in our country has been elevated to the level of government policy. As a logical continuation of the aforementioned tasks, the teaching of mental arithmetic exercises for children of the same age begins to look creatively at problems, taking responsibility for each issue. We know that mental arithmetic exercises create the ability to quickly respond quickly by calculating the examples mentioned in children in the brain. Children engaged in the mental arithmetic program develop such ability as concentration, visual memory, creative thinking, listening and observation, imagination, logic, and analytical thinking.

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