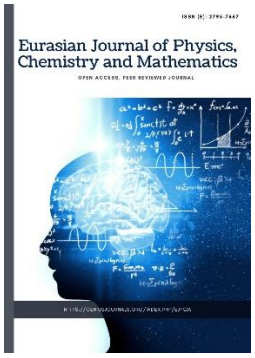

Teaching arithmetic operations in elementary grades

Rashidxon Uulu Atabek Teacher of Turan International University

Zohidova Zarnigor Sodiqjon qizi Mathematics teacher

ABSTRACT

State education is encouraged to create equal opportunities for each of the standard students in education, to encourage each of them to achieve high results, and thereby to ensure a different organization of the educational process. The production of state educational standards by subject, by field of education, based on the selection of the variant of the subject, implies the improvement of educational methodical complexes, including mathematics teaching in primary classes. Arithmetic operations in elementary grades serve to ensure the internal connection of academic subjects and the inter-cohesion of academic subjects based on the principle of connection and coordination of knowledge. Fulfillment by students of the requirements of performing arithmetic operations in elementary grades helps them acquire all the necessary knowledge, skills and abilities.

- adaptation of students to the surrounding natural environment.
- mastering various types of activities, educational work, communication.
- teaching self-control and assessment.
- the description of the specified level of a certain general natural-scientific talent and its further development.

Thus, the process of performing arithmetic operations in elementary grades is not only the knowledge, skills and competences of teaching mathematics to the learning process, but also the complex of the individual's main activities, labor, learning, communication, moral and physical maturity. also ensures the formation of appropriate qualities.

Theoretical foundations of the methodology of teaching students to perform arithmetic operations. The socio-economic relations in the system, the changes in the public education system, as indicated in the "Educational Development" law and the "National Personnel Training Program", are important for every class student. the task is being set. These tasks make it possible to distinguish specific links for primary education, which are the introduction of education in the programs of various academic subjects, curricula, textbooks, and a methodical system. network can be formed.

Keywords: Arithmetic operation, methodology, task, science, system, concentrate, measure, interactive education, pedagogical technology, techno-pedagogical, communication

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education system, as indicated in the "Educational Development" law and the "National Personnel Training Program", are important for every class student. the task is being set. These tasks make it possible to distinguish specific links for primary education, which are the introduction of education in the programs of various academic subjects, curricula, textbooks, and a methodical system. network can be formed.

State educational standards open wide opportunities for creating educational-methodical complexes (programs, curriculum, textbooks) in the academic subject, as well as based on the principle of interdisciplinary connection and advancement of knowledge. serves to ensure the connection of academic subjects. Arithmetic takes the main place in the new mathematics course, similar to the previous one. In the new program of grades I-IV, the content of arithmetical materials has not changed much:

Arithmetic theory (properties, results of operations, and changes in the results of operations when one of the components changes) is less illuminated, strengthened by the connection of the theory with practical problems (counting, measurements, calculations, solving problems): the most important concepts (number , counting, system, arithmetic operations) is kept in a perfectly systematic way.[1]

Also, the arithmetic elementary learning method has been perfected. A new science-based method and style, aimed at timely summarization of basic facts and observations from all stages of education of young students, activation of their recovery activities, establishing interconnections between certain issues, creating independent work training in children. included in the school program.

The distribution of the educational material by academic years shows the gradual expansion of the field of studied numbers.

Grade 1 Numbers from I to 20. Grade 2 Numbers from I to 100.

3rd grade numbers from I to 1000.

Numbers from 4th grade to 1000000 and so on

That is, multi-digit numbers are studied. Arithmetic operations are studied in concentrated form. A total of 5 concentrations are considered: tens, second tens, hundreds, thousands, multi-digit numbers. Each concert, according to its content, reflects the main issues of the course of systematic arithmetic, so students, while learning operations on numbers within one or another limit, form an idea about the essence of arithmetic in general. Repeatedly applying operations on the basis of new numerical material allows to deepen and expand the content of the most important arithmetical concepts. In addition, the gradual formation of solid training and skills (counting, measurements, verbal and written numbering, calculation, etc.) is provided, since the methods of performing these operations gradually become more complex while maintaining generality. , the study of numbering and arithmetic operations in each previous co-center is a preparatory work for the future study of the corresponding problems, and in each subsequent ho-center the previously learned material is summarized and strengthened.

The concentric structure of the arithmetic course is suitable for the psychological characteristics of young students: the initial introduction to counting and arithmetic operations should be performed on the example of small numbers using sets of objects, it is necessary to gradually expand the area of numbers. visual - adapted to the development of children's thoughts by moving from moving actions to abstract actions. We describe in detail the reasons for dividing each concentration, the method of learning the numbering of numbers in this concentration, as well as the method of learning arithmetic operations.

Interactive method - by increasing the activity between students and the teacher in the educational process, it serves to activate the learning of students and develop their personal qualities. The use of interactive methods helps

[1] M.E.Jumayev, Z.G’ Tadjieva. Boshlang’ich sinflarda matematika o’qitishmetodikasi. (OO’Y uchun darslik.) T.: “Fan va texnologiya” 2005-y. 10 b

to increase the effectiveness of the lesson. The main criteria of interactive education: informal discussion - the opportunity to freely describe and express the educational material, create opportunities for students to take initiative, assign tasks to work as a small group, class team, etc. consists of methods, which are of special importance in increasing the effectiveness of educational activities.[2]

Currently, one of the main directions in the field of improving educational methods is the introduction of interactive education and training methods.

All subject teachers, including elementary school teachers, are increasingly using interactive methods in the course of lessons.

As a result of the use of interactive methods, the students' skills of independent thinking, analysis, drawing conclusions, expressing their opinion, being able to defend it based on the basis, healthy communication, discussion and debate are formed and developed.

Interactive means that the effectiveness of the lesson increases due to the interaction between the teacher and the students, the student learns a new lesson through independent action, reflection, discussion, and the student independently achieves the set goal in the lesson. he tries to find answers in small groups with active participation, that is, he thinks, evaluates, writes, speaks, and listens, most of all he actively participates. Pupils who have understood the content of the task based on interactive methods, without knowing it, enter the educational process with interest.[3]

The purpose of using technologies used in primary classes:

It consists in developing a sense of present responsibility in students, forming a way of thinking based on debate and free thinking. There are many types of interactive methods that are widely used now, and not all of them are suitable for use in primary education. First of all, the reading and writing speed of a primary school student is low, and in most cases, there are more than 30 students in the class. Interactive methods are intended for relatively small audiences (up to 30) and more for the middle and upper levels of the continuous education system, and there are very few experiences of using them in primary classes. That's why we are talking about new technologies that can be used only in elementary school mathematics classes.

Interactive method in discussing problem situations related to the topics covered in the class: "Brainstorming", "Lost chains", "Ask a question", "Insert", "BBB", "Discussion - discussion", "Problem questions", "Working in small groups ", "Method of Angles", "Cubes" methods, will help you to find their solution through debate and discussion.

The use of the "Brainstorming" technology consists in gathering as many suggestions, ideas and opinions as possible in different ways to solve the same problem. Any suggestions are welcome at first. Then, the best one is selected from among them. The trickiest part of using this method is to "Remember" all the suggestions. Therefore, it is necessary to write them down. The teacher writes them down on the board or paper with conditional symbols and abbreviations.

Various suggestions can be made in this regard. It is best to count the number of rectangles with 1 cell first, then 2, 3, 4, 5, 6, 7, 8 cells. Or, proposals are collected for calculating the value of an expression in a convenient way.

For example: a way to find the sum of all natural numbers from 1 to 20 is asked. All offers are welcome. A summary is found for several of them and the methods are compared. The group or pair that comes up with the most convenient method will be awarded.

Solving the problems, examples and tasks given in the lesson in pairs also teaches students to exchange ideas, complement each other and, if necessary, teach each other. This method is called "Pair work". The teacher assigns any task that students can solve independently in pairs. It is more appropriate for such a task to be creative in nature. The "Lost

[2] M.E.Jumayev. Boshlang'ich sinflarda matematika o'qitish metodikasi. T.:O'qituvchi. 2006-y. p56

[3] V.V. Danilova "Matematicheskaya podgotovka detey v doshkolnix uchrejdeniyax". -M., 1987 y. p102

Chains" method is used in primary classes to restore a certain sequence. In this case, the teacher puts a sequence related to a topic, concept, algorithm separately and in an irregular manner. Pupils should make a chain of logically connected words to words that are not in order. This method can be used in a group of 4-6 people, or with the whole class.

We believe that the teacher should move from the role of knowledge transferer to the role of organizer of the educational process, manager of study activities, and development of students' activity by psychologically and pedagogically rational support.[4]

Modern research on the theory of pedagogical technology and the problems of its application in the educational process helps to deeply understand the importance of this theory in ensuring the development of education, to determine its possibilities and to occupy a large-scale information field.

Knowing the mechanism of formation of the theory of pedagogical technology and its use, allows identifying the most effective forms and methods of developing and managing the educational process, which is not only of theoretical, but also practical importance.

The work of researching pedagogical technologies in the theory and practice of education requires an interdisciplinary (pedagogy, psychology, methodology, pedagogical methodology, philosophy, sociology and other disciplines) approach based on connection and dependence. Certain theoretical aspects of educational technologies and favorable conditions that have a special place in the application of technology to the educational process have been analyzed in each of the indicated scientific areas.

Technology is absorbed into the labor process itself. Regardless of the form of technology implementation, the main goal is determined by the description of general process operations, subject, means and final result. Therefore, the essence of pedagogical technology as a form of pedagogical process implementation is manifested in the field of pedagogical activity, the human mind is manifested as a modified work, expressing the ideal form of collective interaction perception and dialectical opposition. Accordingly, it is necessary to look for the laws of consciousness reshaping from social technology, and the main forms of introducing these laws from pedagogical practice based on pedagogical technology;

- Pedagogical technology separates from social technology and, passing through the conditional collective rehearsal (training) reflex stage in its development, separates the basic technological interactions into a system of actions and operations that repeat in a purposeful way. The observed goal of this is to strengthen social consciousness and convey the accumulated experience to new generations, and its subject has an idealized description;

- the logic of the creation and development of the theory of pedagogical technology is manifested as a situation that reflects the formation of the general technological theory in the main stages. The basis of this characteristic is the deductive approach that allows drawing conclusions as the most important form of the thinking process;

- pedagogical technology is the main period of "laying bricks" for the creation of the theory, a technological change that helps to reveal the essence of the five technological aspects in the pedagogical process, which represents the initial "cell" of pedagogical technology, and reflects a system of unique concepts and categories , is related to technological tool and techno-pedagogical interaction.

The concept of pedagogical technology appeared in the 20th century and has been going through the following stages of development.

Initially, this concept was used as "technology in education" from the 1940s to the mid-1950s and expressed the use of audiovisual equipment in the educational process.[5]

[4] L.P.Stoylova, A.M.Pishkalo Boshlang‘ich matematika kursi asoslari. – T.:O‘qituvchi 1991.- 336 b.

[5] R. Ibragimov Boshlang‘ich sinf o‘quvchilari bilish faoliyatini shakllantirishning didaktik asoslari.

The concept of pedagogical technology was first used in the USA in the middle of the 20th century. In this case, the expressions "pedagogical technology" and "educational technology" were used only in relation to teaching with the help of technical means.

Over time, as the level of use of these expressions expanded, their meanings also changed accordingly. Until now, various opinions and conclusions have been substantiated by a number of major scientists in order to define a modern scientifically based single definition of the expression of pedagogical technology.

From the mid-1950s to the 1960s, the term "educational technology" was used to refer to programmed learning.

In the 1970s, the expression "pedagogical technology" was used, and it meant an educational process that guarantees the achievement of pre-designed and clearly defined goals.

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