The Usage of Algebraic Methods to Solve Tasks during the Lessons of Mathematics in Elementary Grades

Nabiyeva Mutabar Mukhammadayup kizi,

NamSU Faculty of Pedagogy 5111700-Primary education and sport educational work, the student of group BT47-16.

Scientific supervisor: Yulduzkhon Shamirova Kabildzhanovna, Senior teacher of the chair "Methods of elementary education" of Pedagogical faculty NamSU, the candidate of pedagogical sciences

Annotation: *This article discusses the importance of using algebraic methods to solve tasks in math lesson in elementary grades. It is also noted that the usage of algebraic methods in primary classes suggests that students can avoid difficulties in mastering mathematics in grade 5.*

Key words: task, capability, algebraic, ability, activity, practice, skill.

On March 15, 2017, The Cabinet of Ministers approved the new edition of the regulation called "On the organization of general secondary education in the Republic of Uzbekistan". The changes of this regulation have also brought a lot of improvements in the primary education system. The peculiarity of the new standard is its adaptability to education based on competence. If more theoretical knowledge were presented to pupils in the past, now the focus will be on improving the ability of learners to apply their knowledge in practice.

The first president of the Republic of Uzbekistan I.A Karimov said: "If the human finds a worthy place in the world, he lives being satisfied with his life, destinyand the country, and he is engaged in creative activity whole life."[1] Indeed, happy person, who have a place in life, can do great things for their motherland. Today, our president Sh. M. Mirziyoev, who is the caretaker of the younger generation, is doing many things to reveal the talents and capabilities that the youth have in their lives. This is evidenced by the followings like upbringing of a healthy and harmoniously developed generation, creating conditions and opportunities for them to realize their creative and intellectual potential. Today, there are many young people with a lot of talent and capability who are along the world in science and education. Primary education is oriented to provide students with mastering basic reading, writing, numeracy, creative thinking, self-control, speech etiquette, personal hygiene and healthy lifestyle. Mathematics curriculum

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[1] Journal ''Primary education'', 2010, 4th issue, page 24

focuses on topics such as "Economics lessons", "Frugality lessons" and simple programming elements.

In today's rapid, fast-paced era, there are a lot of technical tools to distract readers. At such times, the teacher needs real skill to attract the pupils' attention and to focus their thinking on the intensive learning process. The teacher achieves to this level through continuous investigation, expertise, and introduction of modern technology. Teaching elementary schoolchildren to think independently and cultivating creativity is one of the most important tasks today. The importance of the teaching the material that is up to date and chosen by the teacher has a special place in the development of creative activity of the pupil. Particularly in tasks included in the elementary education curriculum, there are different ways of decision-making, so the student should learn how to identify them and select the easiest to apply. Teaching algebraically-structured matters in elementary school serves as a tool of special preparation for secondary schools. This allows the pupil to express a particular link using mathematical signals. This lets the text to be mathematical. In order to teach the algebraic methods of solving the tasks, the following case can be examplified: A few ones in the morning and 18 "Nexia" cars in the afternoon were brought to the car showroom. There were total 27 cars in the show room. How many cars were brought to the car showroom in the morning? We put this task in the ordinary mathematical language. In the morning there were brought x cars and in the afternoon -18 "Nexia" cars. We know that all the cars brought are 27, so $x + 18 = 27$. The equality $x + 18 = 27$ is the equation. The condition and question of the subject is expressed by mathematical signals. To find the number of cars in the morning, you just have to find the value of x to undo the equation. Before deciding on such tasks by equating, students need to know how to solve simple equations. In order to provide students with a comprehension of mathematical components, they can be given different tasks:[2]

1. The sum of 10 and 3 is 13
2. The number 15 from 12 is big to 3
3. The number 6 is equal to 3 increased to 3.
4. The distinction of the numbers 7 and 3 is equal to 4.

Only then, it can be given to write more complex equations and equations focused on to find an unknown number:

1. The sum of 8 and x is 14.
2. The number x is greater than 12 to 3.
3. The number x is less than 11 to 3.
4. The number 20 varies from x to 2.

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[2] Journal ''Primary education'', 2010, 2nd issue, page 30

5. The number 7 is much than x to 4. The following tasks can be transformed into algebraic methods: Cotton-growers harvested 250kg cotton till noon and 300kg cotton in the afternoon. How many kilograms of cotton have they picked up till evening?

The following expression is generated to solve the task: $250 + 300 = x$

Let us also consider the following task: 16 tonnes of wheat was harvested in the combine. 9 tonnes of wheat remained after shipping some part to the warehouses. How many tonnes of wheat have been sent to the warehouse? Let's take $16-x = 9$ and we'll fix it. If the method is set in the case of the task, composing the equation will be easier. For example: there had been 14, and brought - 8, how much is it all?

The preparation for solving structured tasks with equations should be begun with simple questions. Then, the relationship between given and unknown numbers moves to the equation that is based on the text fully presented by means of actions. For example: The unknown number that is increased by 5 times is equal to the distinction of numbers 60 and 25. Find an unknown number. The students make the following equation by text:

$5x = 60-25$

$5x = 35$

$x = 35: 5$

$x = 7$, and they find the unknown number is 7. Such tasks will help you to cope with logical problems by using equations.

Solving problems in different ways by composing equations increases the logical thinking of learners, and promotes such qualities as independence, creativity, and achievement. Mathematics is attractive, it also serves in every aspect of life. Students who are interested in it are always found.[3] However, there are not few people who consider this science it as hard to know and without feeling its attraction, they face difficulties in life. It is important for teachers to make pupils get interested in this subject from elementary school in the school period. At the same time, extra-curricular activities are also helpful. Through events and club activities, students will be able to briefly familiarize themselves with the activities of great mathematicians. It also aims: to sole non-traditional tasks, to increase the interest in science, and increase the efficiency of thinking in different situations. For the third class, the following task can be questioned: 3 caps can be knitted from two spire of thread. How many spires of thread are needed to produce such 9 caps? Here are the resolutions: 2 spires of thread - 3 pcs   x spires of thread - 9 pcs.

Solution: $3 X = 9 * 2$

$3X = 18$

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[3] "The methodology of teaching mathematics in elementary grades". N. U. Bikbaeva. The methodology of solving simple tasks. Page 271

X = 18: 3

X = 6   Answer: 6

We have solved the problem by algebraic method. This method increases the child's interest in solving the task. The reason is that the pupil is eager to find the number behind the "X".

It is also necessary to work separately with low-paced students at school. When dealing with low-paced learners, it is necessary to pass from the easy to the complex one. The more intense and consistent the studies are, the more interested the child will be when the selected issues are based on the pupil's life stories. It will allow the one to reach friends soon. For example: Kamil aka bought 6 copy books for her son and 8 ones for his daughter. How many copy books did Komil aka buy in total?

Resolution: X = 6 + 8

X   =   14

Answer: 14

Among talented students, there are many students with mathematical skills. Such students are able to think, analyze and summarize. They love solving the examples and the tasks. These pupils also hurry up to the teacher. Once the talented pupil is asked to read the text, he will be able to find out how to do and answer. Talented learners ask teachers to give more complex tasks as well. One of such issues is that: 78 kg of flour was given to the kitchen for 7 days. In the previous 5 days, 12 kg of flour was used daily. How much flour should the flour be used for the next two days if it is consumed in the same way? Students use the algebraic method of writing a short term: 78 kg = 5 days per 12 kg, 2 days per x kg

Resolution: 1) 5 • 12 = 60

               2) 78-60 = 18

               3) 18: 2 = 9

Answer: In the rest of the day, 9 kg of flour was used.

It is no coincidence that one of the basic competencies that should be shaped in the pupils according to the new SES has been chosen as "Mathematical literacy, the awareness of and use of innovations in science and technology". The reason is that there is no any sphere that requirement for mathematical literacy is not necessary. That is why, psychologists have proved that the full acquisition of knowledge, practice and skill can only be achieved by the independent use of them under changing circumstances. If the educator teaches only simple examples and tasks in the elementary class, it can lead the student to face hardships in the fifth grade if he fails to apply different methods. The perspective teacher take into the use of other methods, such as algebraic methods account that lead to the positive outcome.

References:

[1]. Resolution of the Government of the Republic of Uzbekistan of April 6, 2017 № 187 "On approval of the State

educational standards of general secondary and secondary vocational education".

[2]. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No 140 of March 15, 2017 "On approval of the Regulation on general secondary education".

[3]. The 2nd issue of the journal "Initial Education".

[4]. Order No.166 of May 16, 2017 "On the Establishment of Targeted Learning Programs for the Effective Implementation of DTS and Curricula for Secondary Education in Practice."

[5]. "Methods of teaching mathematics in elementary grades" N.U.Bikbayeva, Tashkent, 2006.

[6]. Mathematics textbooks in Tashkent in 2018.

[7]. "Primary education" magazine number 4 in 2010.