TEACHING THE CONCEPT OF FRACTIONS AND FRACTIONS IN ELEMENTARY MATHEMATICS CLASSES AS A METHODOLOGICAL PROBLEM

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Annotation: *This article describes the classification of tasks performed together by the teacher and students in the primary 3rd grade mathematics textbook, interactive methods and their types, as well as their special importance in increasing the effectiveness of educational work.*

Key words: *interactive methods, interactive education, computing skills, assignments, educational games.*

Interactive methods - by increasing the activity between students and the teacher during the lesson, they serve to activate the acquisition of knowledge and develop personal qualities. The use of interactive methods helps to increase the effectiveness of the lesson. The main criteria of interactive education: conducting informal debates, the opportunity to freely describe and express the educational material, the number of theoretical knowledge acquisition is small, the number of practices is large, the creation of opportunities for students to show initiative, tasks for working as a small group, large group, and class team. it consists of giving, performing written work and other methods, which differ from other methods in that they have their own importance in increasing the effectiveness of educational work.

Science is the basis of development. Neither the state nor the society has a future that does not rely on the achievements of modern science and innovative ideas.We can take Uzbekistan to a new stage of development only at the expense of science and enlightenment, intellectual potential, well-educated personnel.

Sh. M. Mirziyoyev

In the world educational practice, the concepts of fractions and fractions, the theoretical foundations of understanding and perception of their content are being researched scientifically, scientifically and methodologically. In primary schools in Finland, scientific and research work is being carried out in the field of strengthening the responsibility of the educational institution and parents in raising the level of knowledge of students, the education of artistic and aesthetic thinking in the USA, and the formation of concepts of information acquisition of students in Germany. Scientific-methodical work is being carried out to improve the integration of information and resources in elementary mathematics classes and to improve them based on an innovative approach.

In the world, improved methods of ensuring the integration of information and resources have been implemented in primary school mother tongue and reading classes. In particular, "Intellect maps" based on foreign experiences in the researches on the implementation of modern teaching in the literacy and education system in developed countries such as Russia, Singapore, Hong Kong, Japan, Finland, USA, Germany, England, France), there are various methods of personality formation and development, such as "Think and write". Today, on the basis of an integrative approach to all areas of the world, it is aimed at increasing the quality and efficiency of primary education, to raise the level of cultural awareness of those who can freely express their opinions orally and in writing, have high grammatical literacy, developed speech competence. is important.

In ancient times, special symbols were used for basic fractions, and the rest were formed using arithmetic expressions performed on basic fractions. For example, in Egypt, fractions are defined as follows:

half - L\ one fourth — x;
one third — A; one-sixth — £.

The Romans called 6 ounces - S (the word semis is Latin for half). For example, they wrote seven out of twelve: "S". The modern notation of the fraction (with numerator and denominator) was created in India, where only the decimal point was missing. The current exact inscription of Kasr was written by the Arabs in the 16th century. Brief historical information about the emergence of the concept of fraction and negation Brief historical information about the emergence of the concept of fraction. A fraction (Arabic, - bolak, rarcha) is a mathematical number consisting of one or more parts (parts) of one. A fraction is represented by the ratio of two whole numbers: — or n/m. Here, m is called the denominator of the fraction, and n is called its image. The denominator is written below (or above) the line, and in the case of a figure, above (or on) the line. The denominator shows how many parts a number is divided into, and the numerator shows how many of these parts are in this fraction. For example, in the fraction - the picture is 3 and it shows that the fraction represents three equal parts. If the denominator is 4, it means that the four parts make a b.b whole. The oldest fractions were written in reverse of whole numbers. Ancient symbols represented a part of two, a part of three, a part of four, etc. Egyptians used Egyptian fractions around 1000 BC. About 4,000 years ago, the Egyptians used a slightly different method of dividing numbers by fractions. They used the lowest common denominator to perform operations on fractions with the same image. Their methods produced the same results as modern methods. The Greeks used fractions with the same image. Around 530 BC, the disciples of the Greek philosopher Ryphagor discovered that the square root of two cannot be written as a fraction. Around 150 BC, warrior mathematicians from India wrote the Sthananga Sutra (pronounced Sananga Sutra). This work is written about number theory, arithmetic operations and operations on fractions. The methods of writing one number below another and calculating fractions are found in a work written by Aryab Hatta around the year 499 of our era. In Sanskrit

literature, fractions or rational numbers are always written as a whole number followed by a fractional number. The fractional number is written below the whole number line. Kasming itself is written in two lines. The surat written in the first line was called amsa, and the naxraj written in the second line was called cheda. If the fraction is written without any other sign, it means that this fraction should be added to the whole number above. If a small circle sign is placed on the right side of the fraction, it is understood that this fraction should be subtracted from the whole number. The medieval Moroccan Muslim mathematician Abu Bakr al-Hassar first wrote about the horizontal line dividing the numerator and denominator. al-Hassar in his work: "...for example, if you are told to write three-fifths and one-third of five-thousandths, write like this:

A little later, in the 13th century, writing fractions in this style is also found in the works of Leonardo Fibonacci. Although the Persian mathematician Jamshid al-Koshi claimed to have invented decimal fractions in the 15th century, according to J. Lennart Berggren, he was mistaken. Because decimal fractions are found in the works of Abu'l-Hasan al-Uqlidisi, a mathematician from Baghdad who lived 5 centuries before him, that is, in the 10th century. Although there are different views among the historians of mathematics that al-Uqlidisi was one of the first 231, there is no doubt that he made a great contribution to the concept of decimal fractions. Mathematicians of the East, along with working in the decimal number system, also worked with decimals. The first information about this belongs to al-Koshi, who lived and created in the first half of the 15th century. He easily worked on decimals and thought about the use of commas in numbers (-1442). For example: 25.07 was shown to be written as 358.501 by showing 14.3. Calculated the 16 exact decimal places of k using regular 3*228 numbers drawn inside and outside the circle. 150 years later, F. Viet measured 9 exact rooms using 3*217 angles, and in 1597, Van Roumen repeated al Cauchy's result and extended the theory of constants. In general, it was introduced in Eurora in 1585 by the Flemish mathematician and engineer S. Stevin. Even earlier, there was information about decimal fractions. For example, Yan Hui (1261), who lived and worked in China during the Sun Dynasty. One of its examples is 24.68 * 36.56 = 902.3008

LIST OF USED LITERATURE:

1. Azizkhodzhaeva N.N. Pedagogical technologies in increasing the efficiency of the educational process. –T.: 2007.14–23-p.

2. Abdukodirov A.A., Khaitov A.A., Shodiev A.A. Information Technology. - Tashkent, 2004 .-- 76 p.

3. Abdullaeva B.S. Methodological and didactic foundations of interdisciplinary communication: ped. fan. doc. diss ... - Tashkent: TDPU, 2006 .-- 263 p.

4. Abdullaeva B.S., Saidova M.Zh., Dilova N.G. Methods of teaching mathematics. Textbook. 2021 - 300 HP

5. Begimkulov Yu.Sh. Scientific and theoretical foundations for the introduction of modern information technologies in teacher education. Monograph. - Tashkent: Fan, 2007 .-- 160 p.

6. Saidova M. Yu. Improving the use of information technology in mathematics in primary school: Ped. dissertation for the degree of Doctor of Philosophy. Tashkent, 2020, 142 p.

7. Saidova M.Yu., Kasimov F.M. Development for laboratory studies. Toolkit. Bukhara, 2019, 122 p.

8. Saidova M. Yu. Collection of tests for primary school. Toolkit. Tashkent, 2019, 233 p.

9. Saidova M. EDUCATE STUDENTS BY SOLVING TEXTUAL PROBLEMS // European Journal of Research and Reflection in Educational Sciences Vol. - 2019. - T. 7. - No. 12.

10. Saidova M.Zh. Methods and importance of the use of innovative technologies in teaching the "Decimal" hub in the process of teaching mathematics in primary school // www. auris-verlag. de. - 2017.

11.L.Sh. Levenberg et al. "Methods of teaching mathematics in primary school." Textbook. T. Publishing house "Teacher". 1985 360 pages.

12. Khaitov F.N., Shamsiev A.Sh., Yusupov R.M., Temurov S.Yu. Guidelines for writing, submitting and defending a dissertation. Jizzax. 2008, p. 32.

13. Bikbaeva N.Yu., Yangabaeva E. Mathematics. Textbook for 3 grades. Tashkent. Teacher, 2008, 208 pp.