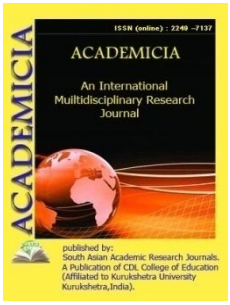
ACADEMICIA

ISSN: 2249-7137 Vol. 11, Issue 6, June 2021 Impact Factor: SJIF 2021 = 7.492

ACADEMICIA
An International Multidisciplinary Research Journal
(Double Blind Refereed & Peer Reviewed Journal)



DOI: 10.5958/2249-7137.2021.01623.2

INTRODUCING PRIMARY SCHOOL STUDENTS WITH THE CONCEPT OF "SHARE AND FRACTION" BY USING INNOVATION TECHNOLOGIES IN MATHEMATICS LESSONS

Roziyeva Nigora Kamtarovna*

*Masters in Preschool and Primary education faculty,
Bukhara State University, UZBEKISTAN

ABSTRACT

This article examines that the method of using educational technologies in process of teaching the concept of share and fraction and developing methodical recommendations in primary school mathematics lessons. Furthermore, creating a system for teaching the concept of share and fraction and explaining the usage of that system in the subject of mathematics in primary school.

KEYWORDS: *Mathematics, Share And Fraction, Innovative Method, Fraction, Pedagogical Technology, Simple Fraction, Primary School, Half, Quarter.*

INTRODUCTION

In the era of globalization, the development of science around the world has become one of the key factors in the rise of society and one of the global challenges of the 21st century is characterized by the introduction of innovations and scientific advances into the economy.

Education is rising to a new level, students` knowledge is expanding, and getting information is becoming easier, so in the process of such growth, the lack of use of innovative technologies in teaching reduces the effectiveness of education.

First of all, let`s clarify the concept of "technology". This word came into science in 1872 in connection with technical progress and two Greek words - "technos" - art, skill, craft, and "logos" (logos) - science, meaning, "craft science". However, even this expression does not fully describe the modern technological process. The technological process involves the execution of a certain sequence of operations, always using the necessary tools and conditions. More precisely, a technological process is the activity of a worker (working machine) to create a product as a result of the gradual exposure of labor objects (raw materials) to the tools of labor. If we translate

this definition into a research topic, that is: Pedagogical technology is the process by which a teacher (educator) influences students in certain contexts through the use of educational tools and, as a result of this activity, forms in them pre-defined personal qualities.

It is well known that the concept of technology was introduced in America and Western Europe in the 1960s in connection with education reform. So far, the technologies of B. Bluj, J. Corol, P.Y. Galperin, V.I. Davidov, L.I. Zankov, Charles Temple, and Jenny Steele are popular. Technological approaches to the organization of teaching have been researched by many psychologists and didactics, such as B.P.Bespalko, G.S.Sukhobskoy, T.V.Kudryavtsev, M.I. Mahmudov, T.N. Ballo.

T.N. Ballo. – while defining the concept of pedagogical technology, it is considered as a task-oriented approach to the teaching process, L.V. Zankov, T.Y. Galperin step-by-step teaching, G.K. Selevko and other authors evaluate it as a meaningful generalization.

At the same time, research institutes, public educational institutions and universities working in the field of pedagogy are need to create the most optimal model(regardless of their form, method and means) for the design of the educational process, which will be organized in all types of educational institutions. There have been some successes in this regard, we can find out the information about which reveal pedagogical technology and its essence through the literature created by B.P. Bespalko, M.V. Klarin, J.G. Yuldashev, M.O. Ochilov, N. Saidakhmedov, K. Zaripov, N.N. Azizkhodjayeva, O`.Q. Tolipov, M. Usmonbaeva and others. Our study focused on learning methodology of educational technology in elementary math classes. Scientists such as A.M.Pishkalo, V.Monoxov, Y.M.Kolyagin, L.P.Stoylova, N.Ya.Vilenkin, I.K.Andronov, N.G'aybullayev, M.Tajiyev, J.Ikromov, N.Hamidova, B.S.Abdullayeva; boshlang'ichsinflardamatematikao'qitishmetodikasifanigaN.B.Istomina, A.M.Pishkalo, M.I.Moro, M.Bantova, L.Sh.Levenberg, M.Y.Jumayev, R.Ibrohimov, A.Sodiqova, Z.Tadjiyeva, Sh.Rayhonov, N.Bikbayeva, M.Zayniddinova, O.Xalillayev, A.Nurmetov have made a significant contribution to the foundations of the basic science of elementary mathematics.

In research to improve math teaching in the primary grades, scholars have conducted research on topics such as stratified mathematics teaching in the primary grades (N.U. Bikbayeva), methods of using graphic representations in solving mathematical problems in primary school (L.Sh.Levenberg), logical preparation of young students in mathematics in grades 4-5 (T.Kamolova), problems of activation of educational activity in mathematics lessons of primary school students (SH.R.Rayhonov), problems in developing students` understanding of quantities such as length and surface in the elementary grades (M.Salixova), formation of quantitative, statistical knowledge elements in small school age children (N.Xoliqova), to form the numeracy skills of primary school students using a system of oral mathematical exercises (M.Zayniddinova), didactic bases of formation of cognitive activity in primary school students (R.Ibragimov), a system of creative assignments in elementary math lessons (F.Qosimov).

Innovation means a change in the internal structure of the system, an important part of practice and theory. Implementation of scientific ideas and their technologies includes the content side of the innovation process.

Today, the scope of information has greatly expanded. If the teacher does not work on himself, the previous knowledge will not be enough. When the topics of the lessons are connected with

the sharp events of daily life, the use of various innovative technologies, the lesson will becomes interesting for the students, the acquired knowledge and skills can be remembered. The teacher should use innovative methods of teaching students to improve their mathematical literacy by organizing interdisciplinary math lessons.

A number of studies have addressed the pedagogical, psychological, and methodological challenges of using educational technologies in education. Education is the key to future success, so, today`s student must be able to fully participate in the life of this society as a member of a democratic society in the future, to fully meet the requirements of today`s market economy. At a time when the flow of information is growing rapidly, when various innovations are rapidly entering our lives, it is important to teach a person who has independent critical thinking skills, who always ready to learn new thigs, who do not afraid of cooperation and can communicate freely, should be the main goal of the educational process and opening the way for the use of new technologies in education in this regard is the right step towards achieving the goal. Interactive methods, which are an element of new technology, are widely used today.

In the current situation, it is time to accelerate the transition of mathematics to primary school, to use a variety of methods to engage students in science. Just as there are innovations in our lives, there are innovations in the educational process. The use of educational technology, especially during the teaching of mathematics in the primary grades, further enhances the quality of education. The use of educational technologies is also effective in the teaching of shares and fractions in elementary school mathematics. Because students face many challenges in learning and working with shares and fractions. It is known from psychology that figurative thinking is well developed in students at a young age. Therefore, I think it will be better if the knowledge given to them is explained on the basis of pictures, drawings and interesting games.

Creative assignments play an important role in cultivating independent thinking and creativity in students. Observations and experiments show that primary school students have difficulty completing tasks on shares and fractions. Effective use of educational technologies in the performance of such educational tasks requires the use of innovative technologies in the teaching of mathematics. Therefore, the topic chosen in this context is relevant.

Mathematics is a very interesting science, but it also has some challenges. One of the most difficult topics to teach, especially in the primary grades, is to teach the concepts of shares and fractions using innovative technologies, to expand students` imagination, to form their knowledge and skills, and to perform exercises on shares and fractions serves to enhance their skills.

Teaching students “share” and how to describe it in words or numbers begins in Grade 2. Explaining the concepts of half, quarter and half quarter to students through natural, visual and multimedia examples is effective in creating an understanding of the share. It is said that the concept of fraction is formed by dividing, cutting and breaking different things into equal parts. Before primary school, that is, in preschool, children are given a basic understanding of the concept of share and fraction. For example, they have divided apples, watermelons, cucumbers, bread, etc. into several equal pieces and of the basic concepts of share and fraction. Therefore, it is planned to introduce children to shares and their notation, to teach them to compare, to solve problems of finding numbers by shares and fractions. All of the above issues will be explained in a visual way. In the 2nd grade textbook, the concepts of shares are explained in the example of

cake, ribbon and circles. As the teacher introduces students to the concept of share, they can first cut out 4 identical circles from colored paper and use them on a demonstration basis. The circles are in 4 different colors: red, green, yellow and black. This can be done at the student desk. Puts circles on top of each other. 4 circles are equal. Takes a yellow circle, folds it evenly and cut along the folded line. 2 semicircles are formed. That`s half of the whole circle or part of two. Similarly, the other two circles are divided into 4 and 8 equal parts, and concepts such as "a quarter" and "one-eight (half a quarter)" are introduced to the students. The use of computer technology to make the concept of the sharing more understandable to students works well. Dividing the circle into 2,4 and 8 equal parts and giving one part to the student, leads to a solid mastery of the concepts of "half", "quarter" and "half quarter".

First of all: students should be given theoretical information:

A share is a part of a whole divided into equal parts.

Half is one of the two equal parts of any whole thing.

Real-life examples should be used to give students a realistic idea of the share. For example:

- Take half a tablet in the morning and half in the evening as directed by your doctor;
- One apple is eaten equally by 4 friends;
- A glass can hold a quarter of a liter of water.

It is also important to show the students the percentage of the number on the computer, using various diagrams.

In Grade 3, students are taught simple fractions and simple decimals.

In explaining simple fractions to the student, the student must have a deep understanding of the meaning of fractions in order to master his writing and reading of fractions. The student should have a clear idea of the numerator of the fraction, the denominator of the fraction and the line of the fraction.

The denominator of a fraction is how many parts it is divided into, and the numerator shows how many of these fractions are taken. Fractional line means dividing.

It is precisely in the formation of the concepts of shares and fractions that animated images and animations paly an important in broadening students` imaginations. Because of the complexity of topic, it takes a long time to explain it to all students at the same time. Through multimedia, presentations and various exhibitions, students can gain insights into the topic, there will also an opportunity to save time during the lessons that is, less time will spent explaining the topic and helping students master the topic. Students will be able to see the share and fractional shapes in color on the screen, the possibility of seeing its properties with the help of examples will increase, the visibility will be provided. Explaining the lessons in this way increases students` interest in subject and makes the lesson more effective, in this way, the tasks set in forth in the National Training Program will be fulfilled and the goals will be achieved.

In conclusion, in lessons using innovative technologies, students will be able to demonstrate their ability and potential, will have the skills to work in a team, will learn to respect the opinions of others. And, this will increase the effectiveness of the lesson and ensure the quality of education.

REFERENCES

1. Khalillayev A, Khudoynazarov E. Methods of problem solving in primary school -U .: 2010.
2. Kurmanila Sh Metodikaprepodavaniyamatematiki in the initial class. Astana 2011.
3. Khaydarov B. Q. Textbook for the 5th grade of secondary schools, part 2 - revised and completed third edition. - Tashkent: 2020.
4. Bigbayeva NU, Sidelnikova R. Methods of teaching mathematics in primary school. - T: "Teacher", 1986.
5. Qosimov F.M. The process of creating creative tasks in mathematics. Elementary Pumps and Methods. Tashkent, 2013.
6. Saidova MJ Improving the methods of using information technology in primary school mathematics: Ped. dissertation for the degree of Doctor of Philosophy in Science. Tashkent, 2020.
7. Saidova M. J., Kasimov F. M. Guidelines for laboratory classes // Methodical manual. Buxoro, 2019
8. Saidova M. J., Primary School Supervision Collection. // Methodical manual. Tashkent, 2019
9. Ibragimov X.I., Abdullayeva Sh. Pedagogical theory. -T .: "Science and technology", 2008. - 286 b.
10. Ibrahimova M. The effectiveness of the use of pedagogical technologies in the teaching of primary mathematics. Conference on Scientific and Practical Research in Uzbekistan No 17. 2020.