

## **PECULIARITIES AND CONTENT OF TEACHING MATHEMATICS IN PRIMARY CLASSES BY USING INNOVATIVE PEDAGOGICAL TECHNOLOGIES**

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### **INTRIDUCTION, LITERATURE REVIEW AND DISCUSSION**

It is known that one of the important conditions for the development of the state is inextricably linked with the increase in the level of knowledge of each member of the society. Special attention is paid to the organization of the educational process aimed at developing the younger generation as a harmonious person on a global scale. Based on the results of the use of knowledge, skills acquired by students in everyday activities in developed countries, the system of education is regularly subject to correction and modernization. The government of Uzbekistan also launched its preparations to participate in the world-class international Pisa (Programme for International Student Assessment) Program in 2021[8]. This requires preparation for the International Mathematics specific and Natural Science Trends Study (TIMSS – Trends in Mathematics and Science Study) program in order to determine the abilities of primary school graduates. Also, the state educational standard of general secondary education was adopted, approved by the decree of the Cabinet of Ministers of the Republic of Uzbekistan "on approval of State educational standards of general secondary and special Secondary, Vocational Education" dated April 6, 2017, which is extremely important in the development of the national education system of the country. And also decree of the president of the Republic of Uzbekistan "on approval of the Charter on general secondary education" № 140 of March 15, 2017 and decrees of the president of the Republic of Uzbekistan "on measures to radically improve the system of general secondary, secondary special and vocational education" were adopted in January 25, 2018. Changes related to this sphere of Education brought about innovations in the activities of teachers of our country.

In order to take a worthy place by participating in the above-mentioned international programs, as well as to bring a healthy and harmonious person to adulthood in our country, the president of our country Sh.M. Mirziyov has set up and implemented a modern methodology of teaching, raising the enthusiasm of students to consciously choose a profession, a completely new approach to the creation. [1] Indeed, the intensity of the globalisation process dictates a radical revision of educational programs, the creation of improved normative documents, educational and methodological complexes that serve to bring young people with broad knowledge, logical thinking to adulthood. The implementation of these laws and decisions in the field of continuing education imposes on educators much more responsible duties on ensuring continuity of education with the improvement of State educational standards, educational plans and programs, textbooks, content integration in each subject. Because, the modern teacher should develop the mathematical knowledge, skills and skills necessary for the labor activity and daily life of the students taking into account the conditions of the modern market economy, increase their comprehensive competency. However, cell phone, computer games and various TV series are a serious obstacle to the formation of independent thinking of children. As a result, the desire to educate a harmonious person remains a complete failure. As a result of the rapid development of science and technology, there is a sharp increase in the number of information and the limitation of time for their use in the educational process, the need for the introduction of interactive methods and innovative technologies into the educational system

arises.[4] The science of methodology of teaching mathematics is developing in connection with innovative pedagogical technology. In particular, scientifically based styles and guidelines for the introduction of modern educational technologies into the educational process in primary education have not been sufficiently developed. More theoretical considerations have been put forward regarding the development of modern educational technology and the general aspects of its application to the educational process. At present, the use of instructional technology in mathematics in the process of primary education has not been studied as an object of separate research. The role and importance of modern educational technologies, which are based on the development of mathematical skills and competences of elementary school students, remain unclear. Many teachers do not understand the meaning and essence of modern educational technology. Innovative pedagogical technologies corresponding to the process of teaching mathematics in the primary class have not been developed. In the method of teaching mathematics “why do you need to learn mathematics?”, “What to learn from mathematics?”, “How to learn mathematics?” - if the answers to the questions are sought, now we have to look for the answer to the question, "How to be effective and effective teaching?". [3]

At present, in order to formulate the communicative competence of students, increase their mathematical literacy, it is necessary to understand the texts of a mathematical example and issue, store it in their memory, process it logically. It can remain in the memory of the reader through verbal (reading, listening and speaking) and written (copying mathematical tasks, transferring them to the appearance of a column, diagram, table and scheme). It gives a better result if it is applied independently. In the formation of communication and mathematic literacy, the following factors are important:

- 1. The integration of the mastering of mathematical knowledge** is the main task to ensure that listening comprehension, speaking, reading and writing skill types participate in exactly the same period.
- 2. The use of Audio media materials-** newspaper, journal materials, audio, video materials, encyclopedic materials, timely and productive use of historical data plays an important role.
- 3. Collaborative activities-** teachers and students interact with each other so that they can solve a problem and a problem. They try to solve mathematical tasks by asking each other question.
- 4. Work in groups** is a type of work that operates together from 3 to 7 participants. In this regard, students share their thoughts on various assignments, prepare posters on a given topic, the activity is conducted on the basis of mutual communication.
- 5. Work in pairs** is a process in which two people operate. Students communicate with each other through the performance of certain mathematical tasks, exchange ideas. [5]
- 6. Increasing interest in learning mathematics.** It is a state of mind that every reader feels himself responsible for the knowledge he receives. For this it is necessary to increase motivation. It is necessary to achieve a high level of self-demand in the student.
- 7. Increasing the teacher's activity** – if the teacher's role in the management of the classroom is not visible, the lesson process does not pass as if it were a disappointment. Interactive pedagogical cooperation forces students not to be indifferent in the course of the lesson, independent thinking, creativity and search.
- 8. Formation of the mathematical language and culture** is the basis for the transfer of lessons in the official, literary language using the mathematical terms effectively.

In our research work, we want to show that in order to illuminate the features and content of innovative pedagogical technologies, it is possible to apply “Boomerang” technology to mathematics lessons and thereby develop the mathematical skills of students.

**Description of technology.** This technology is aimed at educating the students in the course of the lesson, working with various literatures outside the lesson, working with texts, keeping in mind the learned material, speaking, being able to express their thoughts freely, having a lot of knowledge in a short time and being able to evaluate all the students by the teacher during the lesson.

**The purpose of technology.** The acquisition of the materials distributed during the learning process by the students in a single and group position, as well as the control and evaluation of the extent to which the assignments in the disseminated materials are mastered through dialogue and discussion and various questions. Creating an opportunity for each student to have their own assessment during the learning process.

**Application of technology.** It can be used in the course of the lesson individually, in the form of a small group and a team.

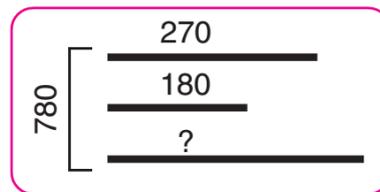
**Tools used in training.** Distribution materials intended for independent study, study and mastering in the educational process (short texts, information on the mentioned topic or on a new topic).

**The order of the training.** This technology is carried out in several stages:

- students are divided into small groups of 5;
  - students are introduced to the purpose and order of the lesson;
  - examples and issues numbered from 1 to 25 on the subject for independent study are distributed to each subgroups(from 1 to 5 on the 1st group, from 6 to 10 on the 2nd group, from 11 to 15 on the 3rd Group, etc.);
  - the assignments given are carried out independently by the students individually and teach each other;
  - a new group will be created by the teacher from each group of members (for example, students will be given labels numbered from 1 to 5, students will be placed on Table 1, students will be placed on Table 2, students will be placed on Table 3, students will be placed on Table 3, etc.);
  - each of the members of the new group shares information within the group, respectively, with the assignments they have performed independently, that is, they explain to each other, they achieve the appropriation of the assignment;
  - internal control is carried out within the group to determine the degree of assimilation of the information provided;
  - new group members return to their initial position groups;
  - in order to assess the knowledge of students in the remaining course of the lesson or calculate the points scored, a "group accountant" is appointed in each group;
  - in order to determine to what extent all the assignments are mastered by the students, the teacher addresses the students with questions, conducts an oral survey, that is, the teacher makes a question - answer with the students (for example, in groups there will be cards written from 1 to 25, and on the other side of them there will be written the exact answer If the teacher shows 1-card, the members of the group indicate the exact answer to the task to the teacher);
  - based on the answers to the questions, the total points scored by the groups are determined;
  - one question is drawn up by each group member, linking the content of assignments in the group to life;
  - through the questions prepared by the groups, the question-answer is organized ("group accountants" calculate the points on the answers given);
  - the sum of the total points scored by the members of the group is determined;
  - the total points scored by the groups are distributed equally among the members of the group.
- For example, assignments for the 1-th group. [2]

1. Calculate.  $630 : 9 + 70$
2. Solve the problem. Flowers were brought to the flower shop. One third of the rose is the rose. There were 30 of them. How many flowers were brought to the store?

3. Draw a problem based on the picture and solve it.



4. Calculate  $1000 - (685 + 129)$   
5. Compare:  $76000$  va  $76 * 10$

In our opinion, based on the results of the research on the development of mathematical skills of primary school students through the use of innovative pedagogical technologies, the following conclusions were made:

1. The state of teaching support for innovative pedagogical technologies in the process of teaching mathematics in primary classes was studied pedagogically, psychologically and methodically. The content of educational and methodological complexes from elementary mathematics was improved. It was found that the improvement of existing Mathematics textbooks and alternative textbooks should be developed, which are fully in line with the state standard of education and the curriculum, based on the competency approach.
2. The choice, adaptation and successful application of innovative pedagogical technologies that correspond to the process of teaching mathematics in the primary class is the demand of the current period, which leads to the renewal of the activities of the teacher (positive changes in education, the introduction of new social requirements) and pupil (formation of an aesthetically rich worldview, formation of independent, abstract, logical and creative thinking, participation in the international evaluation system).
3. In the elementary school, the process of teaching mathematics was considered as a holistic system, and mathematics classes were designed and planned in advance in a calendar-themed plan, in line with the combination of game, problem, modular and collaborative learning technologies, ensuring consistency and consistency. In the educational process, pedagogical teaching tools, technologies such as "Staircase", " Wheelchair", "Boomerang", "Consciousness Analysis" and "Blitz-Request", "Memory Exercise", "Assessment" have been found to be effective.
4. The development of mathematical skills of Primary School students has been developed modular teaching technology. It was found that it is desirable to prepare future primary school teachers for innovative activities. Navoiy State Pedagogical Institute 5111700-Bachelor of primary education and sports educational work 2, 3-year students of the course "methods of teaching mathematics" subject has been organized on the basis of modular teaching technology and found to be effective.
5. The content of teaching mathematics in primary classes was improved with the introduction of innovative pedagogical technology. Model lesson developments were drawn up using modular teaching technology on each type of lessons in mathematics. As a result of pedagogical experience, it has been proved that this technology is effective.
6. In the lessons of mathematics, interactive methods, electronic textbooks and multimedia applications were used, modern lessons were organized. The skills of Primary School students to work independently in solving examples and issues from mathematics, creative motivations have been formed.
7. During the experiment it became known that not all primary school teachers also have sufficient knowledge of the application of innovative pedagogical technologies to mathematics lessons, in this regard, it has been found that teachers should be organized educational-methodical trainings, seminars, master classes.

8. Summarizing the advanced experience, it is necessary to form an innovative team of teachers on the creation, collection and application of effective methods of using innovative pedagogical technologies in each educational institution, departments of District Public Education.

In general, the development of the mathematical skills of students and the further increase in their mental capacity leads to their formation as a harmonious personality.

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