

**COLLABORATIVE TEACHING PROCESS IN MATHEMATICS CLASSES**

**Rakhmonov Bahadir**

Senior Lecturer, Department of Mathematics, NTM University of Economics and pedagogy,  
[bahodir.rahmonov.92@gmail.ru](mailto:bahodir.rahmonov.92@gmail.ru)

**Annotation:** This article is about the process of collaborative teaching in mathematics lessons, which includes the pedagogy of cooperation as well as the feedback of scientists on this topic, the forms and methods that should be used in the course of the lesson, as well as tools.

**Keywords:** Organization of cooperation; object-subject, Subject-subject, perspective, principle

**Introduction.** Today, the issue of organizing educational cooperation with the educator is important in the educational process in the educational system. This is one of the theoretical approaches to the organization of its activities in an independent way, both for the educational biker and for the educational person, and this theory is a new worldview associated with the phenomenon of the correct Organization of the “teacher-educational” relationship, that is, the “subject-subject” cooperation.

Collaborative pedagogy develops as non-traditional pedagogy, allowing the personality of the child to be considered in the sense of the subject of his educational activity. Therefore, it is permissible for two subjects in the educational process to work cooperatively. These are the activities of an adult experienced friend, a comrade as an instructor of his own experience to a minor partner, which serve an effective course of educational tasks. In the general secondary education system, this cooperation is manifested in the leadership, the team of teachers and educators, social groups, in all manifestations of the relationship between them. If in the traditional educational system, the relationship “teacher-educator” is based on the relationship of the subject (educator) and the object (educator), that is, the teacher manifests himself only as the leader, guide of the pedagogical process, today collaborative pedagogy serves to brighter demonstrate the “I” of the educational person, to realize his abilities and talents, to develop it. Striving for creativity, creating innovation — is interrelated with the sign of creativeness of collaborative pedagogy. On the basis of this cooperation, the pursuit of creativity, a wide path to the flight of thoughts will be opened.

**Literature analysis.** The pedagogy of cooperation developed with the participation of advanced pedagogical innovators in different countries. In the 70s of the XX century in the USA – R.Johnson, Co.Sharon, M.Montessori; In The UK-R.Ganye, Dj.Briggs, Levi Stross; in Russia in the 80s of the XX century-S.L.Soloveychik, V.F.Amonashvili, N.A.Shalva, V.Shatalov, S.N.Lysenkova; in Uzbekistan in the 90s of the XX century-J.Yoshidev, V.Karimova, N.The saidahmedovs laid the foundation for collaborative pedagogy.

The idea of collaborative teaching is shared by J in different countries, including America.Hopkins University professor-R.Slavin (1990), University of Minnesota professors – R.Johnson, D.Johnson (1987), professor at Colifornia University – Sh.Researched by Sharon (1988). Collaborative teaching, developed by American scientists, mainly provides for the formation of knowledge, skills and competencies recorded in the national program in Educators, Collaborative training recommended by Israeli and European scientists, processing educational material by more educators, developing design activities, conducting training debates and discussions. These ideas complement each other, enrich them didactically.

Advanced pedagogical innovators of Uzbekistan in the development of cooperation pedagogy: M.Ochilov, N.Azizkhadjayeva, Ishmuhammedov, J.G'.Satellites emphasize the importance of

organizing mutual relations between participants in the pedagogical process (teachers and educators) based on the principle of humanism.

For the same reason, B.F.Lomov had argued that individual activity was not spontaneous, but manifested in harmony with the activities of society. B.G.In anenev's research on the culture of treatment, which is considered an important factor in the activity of cooperation, it is especially emphasized that the teacher is an important resource for assessment and analysis, the possibility of upbringing, the mental and moral development of the educated. V.Petrovsky [49], having studied that interpersonal relationships arise from activities in a team, argues that the organization of the teacher's cooperation with the educated in the educational process is not only a means of satisfying their need for communication, treatment, but also an important condition for mastering educational material.

As an author, we can say that, - presentation and appropriation of information on the basis of the cooperation between the educator and the educator; - determination of pedagogical conditions associated with the formation of a friendly environment among students of education in mathematics lessons; - search for pedagogical and psychological opportunities for the formation of a collaborative relationship among students in mathematics lessons; - the definition of the content, form, means, methods and methods of the process of organizing a collaborative environment in mathematics lessons is of particular relevance.

Results and analysis: collaborative teaching in math classes is a teaching method based on collaboration and teamwork among students. This methodology is aimed at developing the activity, confidence and creative abilities of students, teaching them to think clearly and effectively. The main goal of the collaborative teaching process in mathematics lessons is to solve problems in mathematics and to study theoretical concepts in a collective and active way.

1. Basic principles of collaborative teaching

- Social learning: this principle ensures that students interact in a balanced and constructive way to help each other in the learning process.
- Active education: in the process of teaching mathematics, students are only actively involved in halting problems, without being passively receptive.
- Independence: each student learns to make independent decisions, but in the process there will be an atmosphere of cooperation.
- Creativity and creative approach: students should be able to show their potential in solving math problems.

2. Basic forms of collaborative teaching

- Working in groups: students divide into small groups and solve a problem together. After each group has found its solution, they present general conclusions to everyone.
- Lectures and duties: conditions are created for students to exchange knowledge, make presentations and learn.
- Debates and debates: mathematics can have different perspectives, so students argue among themselves and find solutions in different ways.
- Problem solving: each student develops specific methods to directly identify and solve problems.

3. Benefits of collaborative teaching

- Always collaborative, collaborative finding of New Knowledge: Students take advantage of other students' thoughts, views, and experiences.
- Specific role-playing of each student: each student develops their individual abilities by engaging in a specific task.

- Community spirit building: community spirit and trust are built as a result of students helping each other and solving problems together.
- Developing critical thinking and independent decision-making: students learn to analyze other people's opinions, base and adapt their own.
- Recommendation and conclusion: . In the effective organization of collaborative teaching in mathematics classes:
  - Problem selection: for collaborative teaching, it is important to choose specific math problems and different levels of objectives for each group.
  - The correct formation of groups: the correct formation of groups based on the level of knowledge, abilities and personal qualities of students.
  - Listening to students 'opinions and conclusions: encouraging learning by listening to students' new ideas and conclusions.
  - Counter-performance: evaluate the activities of each group and conduct active communication to summarize the results, correct mistakes and mistakes.

The implementation of a collaborative teaching strategy in mathematics lessons is based on the cooperation of parents and teachers, as well as the implementation of modern educational methods. This method plays an important role not only in improving the study of mathematics, but also in the development of creative thinking of young people. In teaching mathematics, it is advisable to effectively organize the learning process in cooperation in order to develop the social, creative and independent thinking abilities of students.

**List of literature used:**

1. Jo'rayev P.X., Raximov B.X., Xomatov SH.F. Yangi pedagogik texnologiyalar. Muammoli ta'lim aasoslangan o'quv-metodik qo'llanma. -T.: Fan, 2005, 66 b.
2. Ibragimova M., Shermatov X. Ta'lim jarayonida faol usullarni qo'llash 90 //Uzluksiz ta'lim. - Toshkent. 2005. 5-son 16-b.
3. Леви Стросс Учитель как личность и профессионал. Пер.с английского К.Капило Москва: Дсло. 2014 -215 ст .
4. Abdullayeva Sh. A. Hamkorlik pedagogikasi.-Toshkent:fan va axborot texnologiyalari, 2017-178-b.
5. Кузнецова В.С. Лозьякова "Повме подходы в организации педагогический деятельности учителей начальных классов" "Начальная школа" 2017| №-2,-С.-11