

# The Basic Principles of Learning of Collaborative Learning

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**Abstract**---*The use of techniques and structures of the method of cooperative learning in comparison with group work is more advantageous and gives the teacher the opportunity to implement innovative approaches in teaching younger students. The student gets the opportunity to develop their abilities, build communication skills and control their actions, draw conclusions. Through the interaction of the student with the teaching material, we contribute to a situation where students work in the lesson more than the teacher. It is the students, who process the information, reflect on it, form the skills of cooperation, the ability to analyze and synthesize. The passivity of the student in the classroom is replaced by activity, interest and a desire to discover the truth.*

**Key words**--*communication, educational process, cooperation, teaching technology, cooperative learning, project method*

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## I. INTRODUCTION

Learning technology in collaboration has emerged as an alternative to the traditional classroom-lesson system. Its authors combined three ideas in a single process:

- team training,
- mutual appreciation,
- training in small groups.

This has been called one term learning in collaboration. When learning in cooperation, the main force influencing the educational process is the influence of the team, the study group, which is almost impossible with traditional training.

This pedagogical technology is considered one of the most time-consuming and not always giving the expected result, often unpredictable.

When training in cooperation, the following tasks are solved: The student studies much better if he knows how to establish social contacts with other team members;

- The ability of students to write competently and logically depends on the ability to communicate with other team members;

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- In the process of social contacts between students, an educational community of people is created who possess certain knowledge and are ready to receive new knowledge in the process of communicating with each other, joint cognitive activity.

Training in cooperation is a joint (divided, distributed) investigation, as a result of which students work together, collectively constructing, producing new knowledge, and not discovering objective realities, consuming knowledge in a ready-made form.

At the same time, two procedural aspects of training in cooperation are clearly visible:

- communication of students with each other as part of the student body;
- the learning process itself.

This method of training is not as "technological" as cooperative learning, so managing the learning process is much more difficult. The role of the teacher here is reduced to the fact that he sets the topic for students (sets a learning task), and then he must create such a favorable communication environment, psychological climate in which students could work in cooperation. At the same time, unlike other teaching technologies, the teacher is a full-fledged participant in the learning process - a fellow practitioner (which, of course, does not relieve him of responsibility for coordination, managing the course of discussions, as well as for preparing materials, developing a work plan, discussing issues and topics) (Mkrtychan M. A., 2005).

Training in cooperation involves the organization of groups of students working together to solve a problem, topic, question. At the initial stages of work on teaching technology in cooperation, the teacher will have to spend a lot of time on a variety of psychological and pedagogical trainings aimed at the following:

- introducing students to each other;
- rallying the student team as a whole, individual groups of students;
- development of the basics of interpersonal and group communication;
- development of skills to participate in a dialogue, lead a discussion;
- study of individual learning styles, socio-psychological types of students working in the same group.

## **II. COOPERATIVE LEARNING TECHNOLOGIES**

Cooperative learning is a small group learning technology. Members of a large group or class are divided into several small groups and act according to instructions specially designed for them by the teacher. Each of the students works on his task, his part of the material until a complete understanding of the issue being studied and completion of work on it. Then the students exchange finds in such a way that everyone's work is very important and essential for the work of everyone else, because without it the task will not be considered completed (some important information will be lost, other students will not receive it).

We give an example of such a learning technology used in distance learning.

### Work in cooperative groups according to the Jigsaw method

The teacher divides the students into groups and gives them a task (by e-mail, posting information on the site, etc.). This task sets a general topic for study (a problem situation, a separate question of a topic, etc.). Using synchronous or asynchronous communication, students should analyze (structure) the received task and divide it into several sub-tasks (from two to four). Then they plan their work and determine who is responsible for what (who is preparing what part of the task).

Further work is based on the following plan:

1. Communication of experts. Students responsible for a specific question can at this stage establish network contacts with their "colleagues" from other groups who received the exact same task. Their joint task is to discuss with each other a strategy for searching and presenting this material to other members of the group, to exchange known information on the issue under study.
2. Search and analysis of information. At this stage, students work individually, collecting and analyzing information. Their task at this stage is to get to know the issue in more detail, to study the material so that it allows them to achieve an "expert" level in this area.
3. Training of experts. After collecting and initially analyzing the information, the experts again work together. They present the collected information to each other (or to a third party, for example, an invited "independent" expert), summarize the work done, develop the final version of the presentation on this topic, which they will then present to other members of the group.
4. General group gathering. Each of the experts "returns" to their group within the prescribed time and conducts a presentation. His task boils down to the fact that in the minimum amount of time he must teach his classmates what he learned himself and present the training materials that he used in preparing for the seminar. On the network, such events are most conveniently carried out either in the form of student communication within the mailing lists (you can also transmit text materials and PowerPoint presentations), or in the form of multimedia teleconferences (video conferences).
5. Analysis of work. After completing the exchange of presentations and discussing all the issues that were not clearly shown in the presentations, students proceed to discuss and evaluate the work of the subgroup as a whole. Everyone notes the contribution of each to the common cause, whether it was possible to work as a team, the educational process is discussed (how convenient it was to communicate with each other, whether everything was clear, etc.).

After the work of the groups, the teacher evaluates their work. How is the work of the group evaluated? Firstly, during the work of the groups, the teacher monitors the group dynamics and individual activity of students, so at the end of the work he can already make a definite conclusion about the educational process. Secondly, the usual way to test students' knowledge on Jigsaw technology is to selectively interview one of the students in the subgroup. A teacher can, for example, meet with a student in a chat and ask him a few questions, the answers to which require good knowledge of the material.

The success of the cooperation groups depends on the teacher's ability to plan the work of the groups and the students themselves to build their learning activities, combining individual work with work in pairs and the group as a whole. The objectives of such work should be clear and accessible to students. At the same time, students should understand that this is a joint activity, but each of them has "his own face" in this activity, preserves his individuality.

### **III. PROJECT METHOD**

The project method is a comprehensive teaching method that allows you to build the educational process based on the interests of students, enabling the student to show independence in the planning, organization and control of their educational and cognitive activities, the result of which is the creation of a product or phenomenon.

The results of completed projects should be "tangible", that is, if it is a theoretical problem, then its concrete solution, if practical - a concrete result, ready for implementation. The project method is based on the development of cognitive, creative interests of students, the ability to independently construct their knowledge, the ability to navigate in the information space, the development of critical thinking. The project method is always focused on the independent activities of students - individual, pair, group, which students perform for a certain period of time. This method is organically combined with the teaching method in cooperation, the problematic and research method of teaching (UvarovA. Yu. 2001).

Work on the project is carefully planned by the teacher and discussed with students. At the same time, a detailed structuring of the content of the project is carried out, indicating step-by-step results and the timing of the presentation of the results to the "public", that is, other students of the group, experts, or, for example, "external" Internet users who are not directly related to the learning process.

At present, it is customary to single out seven main stages of work on the project:

1. Organizational;
2. Selection and discussion of the main idea, goals and objectives of the future project;
3. Discussion of methodological aspects and organization of work of students;
4. Structuring the project with the allocation of subtasks for certain groups of students, the selection of necessary materials;
5. Work on the project;
6. Summing up, presentation of the results;
7. Presentation of the project.

Forms of organization of students' joint activities on the project are determined on the basis of the characteristics of the topic, goals of joint activities, interests of project participants (Dyachenko V.K., 2004). The main thing is that in any case, these are different types of students' independent activities. The success of students' project activities to a large extent depends on the organization of work within the group, on a clear distribution of responsibilities and determination of forms of responsibility for the part of work that is performed.

Projects can be of varying degrees of complexity. The subjects of the projects may relate to some theoretical issue of the curriculum in order to deepen students' knowledge on this issue, to differentiate the learning process. More often, however, the topics of the projects relate to some issue that is relevant for practical life and requires the involvement of students' knowledge not in one subject, but from different fields, as well as creative thinking and research skills. Thus, a natural integration of knowledge is achieved.

Many educational projects are based on research teaching methods. All student activities focus on the following steps:

- definition of the problem and the research tasks arising from it;
- hypothesizing their solutions;
- discussion of research methods;
- data collection;
- analysis of the data;
- presentation of final results;
- summarizing, updating, conclusions (using the brainstorming, round-table, statistical methods, creative reports, presentations, etc. during a joint research).

A variation of the project method is the telecommunication project method. A training telecommunication project is understood as a joint educational, cognitive, creative or game activity of partner students, organized on the basis of computer telecommunications, having a common goal, agreed methods, methods of activity aimed at achieving a common result of activity.

Telecommunication projects are justified pedagogically in those cases when, in the course of their implementation:

- provides for multiple, systematic, one-time or long-term observations of a particular natural, physical, social, etc. phenomenon, requiring data collection in different regions to solve the problem;
- provides a comparative study, the study of a particular phenomenon, fact, event that has occurred or is taking place in various places to identify a specific trend or adoption, decision, development of proposals;
- provides a comparative study of the effectiveness of using the same or different (alternative) ways to solve one problem, one task to identify the most effective, acceptable for any situation, solution, i.e. to obtain data on the objective effectiveness of the proposed method for solving the problem;
- joint creative creation, some kind of development, practical (developing a new plant variety in different climatic zones) or creative work (creating a magazine, newspaper, play, etc.) is proposed;
- It is supposed to hold exciting adventure joint games, competitions.

Currently, many types of telecommunication projects have been developed in the domestic methodology. The main typological features are the following:

1. The method dominant in the project: research, creative, role-playing, orientation and orientation, etc.

2. The nature of project coordination: direct (rigid, flexible), hidden (implicit, imitating a project participant).
3. The nature of contacts (among participants of one educational institution, class, city, region, country, different countries of the world).
4. The number of project participants.
5. Duration of the project.

Any telecommunication project is carried out in several stages, which are carefully planned and thought out. At present, it is customary to single out seven main stages of work on the project:

1. Organizational;
2. Selection and discussion of the main idea, goals and objectives of the future project;
3. Discussion of methodological aspects and organization of work of students;
4. Structuring the project with the allocation of subtasks for certain groups of students, the selection of necessary materials;
5. Work on the project;
6. Summing up, presentation of the results;
7. Presentation of the project.

In the course of work on telecommunication projects, the need may arise not only for the usual exchange of ideas, thoughts, opinions on a particular occasion, but also the need for a quick search for a solution to a problem, search for ideas. In this case, a method such as brainstorming worked well.

When planning telecommunication projects, it is also necessary to think over the forms of organization of students' work. These forms may be different:

- individual projects (inside a large other project),
- paired projects, when partners work on one project in pairs,
- group projects, when groups from both sides or even groups from several regions take part in the project.

Thus, projects can be conducted using e-mail, in the form of newsgroups or web-quests. Forms of organization of students' joint activities on the project are determined based on the characteristics of the subject, goals of joint activities, interests of project participants. The main thing is that in any case, these are different types of students' independent activities. The success of students' project activities to a large extent depends on the organization of work within the group, on a clear distribution of responsibilities and determination of forms of responsibility for the part of work that is performed.

#### **IV. CONCLUSION**

The use of cooperative learning method structures has a positive effect on the work of students in the classroom. The positive aspect of this work is undoubtedly the fact that many students of the class simultaneously learn to speak, learn to see, hear, correct the mistakes of others, thereby enriching and consolidating their knowledge.

Thus, the student's activity in the lesson increases markedly when he becomes the bearer of the teacher's function. Naturally, the student does not replace the teacher in the lesson, the organizing and mobilizing beginning in the lesson remains with the teacher. No subject can be studied by observing how a neighbor does it. In the traditional form of training, most students remain observers for most of the lesson. But working in pairs or teams, communicating with a neighbor, saying the learned wording to him, having the opportunity to teach someone what you know yourself and get, if necessary, advice or clarification, the students form a positive attitude to the subject and skills perform various tasks. The quality of student knowledge improves and the learning process becomes more successful.

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