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Cooperative learning in the class of students

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Abstract. This article focuses on the importance of cooperative learning applied in high school education, emphasizing the advantages obtained by using the in-classroom methods that require cooperation, from the theoretical and practical point of view. By engaging high school students in cooperative learning, they find the classes more enjoyable and more accessible and build the necessary skills for the adult that will work and learn throughout his life in a cooperative manner. Thus, by using methods that involve teamwork assignments, teachers can still cover the mandatory curriculum, building the skills that will help the students be better equipped for life after school.

Keywords. cooperative learning, teamwork

Introduction

The cooperative learning process has been defined as a set of alternatives to traditional training systems or, more specifically, techniques by means of which students work in heterogeneous groups of four to six members and gain recognition, rewards and sometimes grades based on the level of academic performance of the groups to which they belong (Slavin, 1983). (Manning & Lucking, 1991, p. 152)

In another article Hendrix quoting Salvin (1991) also shows that the latter defined cooperative learning as a structured and systematic training technique in which small groups work together to achieve a common goal. Johnson, Johnson, and Holubec have argued that cooperative learning activities can be used to teach specific content, ensure active cognitive processing of information during a course, and provide long-term support for academic progress. According to these researchers, any topic in any curriculum and for any age can be fulfilled through cooperation. (Hendrix, 1999, p. 58)

In Romanian literature, it is shown that "cooperative learning is the use of small groups for instructional purposes, so that – working together – students maximize both their own learning and that of their other colleagues. Through such an organization of learning situations, students depend

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in a positive way on each other, and this positive interdependence leads them to devotion to the group" (Ulrich, 2000, p.55).

Cooperative learning methods have their roots in social and psychological research and theories that have focused on cooperation versus competition, some of which date back to the early 1900s. In the 1980s, cooperative learning methods received considerable attention due to their potential to serve as an alternative to traditional methods used in the classroom, which creates competition between students rather than stimulating a spirit of cooperation (Slavin, 1985).(Manning & Lucking, 1991, p. 152)

Although small group learning has been used since the beginning of human existence, the modern use of cooperative learning began primarily in 1966, with the preparation of professors at the University of Minnesota in the actual use of small groups. Cooperative learning is now used in schools and universities in most of the world, in every field of study and from preschool to high school, and even in adult training programs. The use of this type of learning is so widespread in education that, almost anywhere in the world, it is difficult to find a textbook on training methods or teaching materials that do not recommend cooperative learning (Johnson, 1970; Johnson & Johnson, 1975, Johnson & Johnson, 2009, p. 365)

Studies carried out over the past 25 years have found that a cooperative environment has a positive impact on the learning process (Slavin, 1987, Johnson and Johnson, 1989, Manarino-Leggett and Salomon 1990,). (Hendrix, 1999, p. 57)

The current interest in cooperative learning comes from two big strengths. The first is the recognition that competitive educational environments encourage students to compete rather than learn in a cooperative way. The second is evidence suggesting that learning, when properly implemented, has the potential to contribute positively to academic performance, social skills, and self-esteem. Traditionally, students were educated in schools where competition reigned. Because the students competed for the grades and for the attention and approval of the teacher, the students did not promote or encourage their mutual academic efforts. Cooperative learning programs encourage students of all levels of performance to work together in small groups to achieve the group's goals. Instead of competing for grades and other rewards as individuals, students help each other learn and achieve their intended purpose (Slavin, 1987). (Manning & Lucking, 1991, pg. 152-153)

Following research undertaken by Morton Deutsch in 1979, it was found that, unlike the cooperative classes, the atmosphere in the competitive classes is one that leads to: students who present a high degree of anxiety; students who think less about themselves, and who pay less attention to their work; students with reprehensible attitudes in relationships with colleagues; students who show a low degree of sense of responsibility towards others.

These phenomena have been studied by Deutsch for 35 years, and the conclusions reached are extremely important for the teacher. Thus, the teacher must consider that a higher degree of students' involvement in activities that require cooperation makes the general atmosphere in the class a much better one. The development of certain interests in a specialized role of the cooperative system, the rise of favoritism can have as a consequence the discrimination of members who are not integrated into the group and the evolution of excessive conformism in the absence of the opinion of the majority (Iucu, 2006, p. 113).

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Cooperative learning is based on the following five fundamental elements, as assessed by Johnson, Johnson and Smith (1991), respectively, positive interdependence, "face-to-face" interactions, individual responsibility, social skills, and group processing. (Hendrix, 1999, p. 57)

Positive interdependence is that students must believe that they are tied to other students in such a way that one cannot succeed unless the other members of the group succeed. If the success of the group depends on the success of each individual member (if one fails, all will do it), then a strong form of positive interdependence is created, and team members are motivated to ensure that each student does well.

Regarding "face-to-face" interactions, it is appreciated that after the teacher helps the students establish a positive interdependence, they must ensure that the students interact to help each other perform the task. Students are expected to explain to each other how to solve problems, discuss with each other the nature of the concepts learned, and provide each other with help, support, and encouragement.

Individual responsibility: the overall goal of cooperative learning groups is to help each member become a stronger individual on their own. To ensure that each member grows and learns, students are individually responsible for carrying out their share of the work. Individual responsibility requires the teacher to ensure that the performance of each member of the group is evaluated and to provide the results of this evaluation to the group and the individual.

Social skills: students cannot be expected to achieve common goals if they do not know each other and trust each other, do not communicate effectively, support and encourage each other. If the students are asked to collaborate in an effective way, the teacher must ensure that the students have the necessary social skills for group work. As such, teachers must teach leadership, trust-building, decision-making, communication, and conflict-resolution skills as thoroughly as they would teach academic skills.

Group processing: to the extent that it is necessary for cooperative learning groups to know whether they are working effectively, time should be allocated for group reflection. Group processing involves group members reflecting on a group session to describe which group members' actions were useful and which were not useful, and to decide which actions to take or what needs to be changed.

According to the authors D. W. Johnson and Johnson (1991,), the five elements mentioned in the previous paragraphs help to promote among students a successful experience of cooperative learning. Obviously, all five elements must be present for active learning to take place on the part of each student. The five elements of cooperative learning need to be structured within one of the three types of cooperative learning groups, namely informal learning groups, formal cooperative learning groups and basic cooperative groups. (Onwuegbuzie, 2001, p. 165)

Informal learning groups are less structured and short-term, requiring students to perform a task often associated with a lecture. Formal cooperative learning groups have a longer duration, comprise small groups (2-4 members) and are set by the teacher to undertake a large project, such as a project that will be completed on a certain deadline. Finally, core cooperative groups are stable, long-term support groups consisting of 3 or 5 students. Thus, the basic groups are the most comprehensive and intense forms of cooperative learning, which have the advantage of improving students' learning and increasing attendance in classes.

According to the author C. Ulrich (Ulrich, 2000, p. 58), for cooperative learning to be effective, it is necessary to meet the following conditions:

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• clearly establish a set of objectives (learning outcomes) by which it is clearly explained what the students are going to learn and retain (what they can do on their own when the work within the group is completed);

• the students take into account the objectives that have been exposed by the teacher in carrying out the group's activity;

• students will receive certain clear instructions and recommendations regarding the achievement of the task;

• the groups to which the pupils will belong should be heterogeneous as far as possible;

• students feel that they have equal chances of success;

• students must be engaged in tasks that involve positive interdependence;

• the students accept the fact that the rewards for success lie mainly with the team as a whole than with the individuals;

• students have "face-to-face" interactions and are seated "shoulder to shoulder";

• students exercise roles, behaviours and attitudes specific to positive social interaction;

• students have the ability to carry out group tasks, maintaining their roles, behaviours and positive attitudes;

• consistently, the students reach a consensus and not the directions generated by the majority rule; students have access to information that they can process; the time allotted to students to learn thoroughly is sufficient;

• even after the completion of the tasks and activities carried out within the group, students are able to solve tests, achieve performance and make certain products;

• each student is responsible for the educational outcomes they have achieved individually; the success the group achieves is publicly recognised and rewarded;

• at the end of the group activity, the students appreciate their behaviour within the group to which they belonged.

Cooperative learning can be applied in the classroom through several methods, including: STAD, mosaic, tournament between teams, consensus in the group, group investigation.

The STAD (Student Teams – Achievement Division) method involves completing the following steps: teaching, studying in a team, testing, and recognizing the results and merits of the team. The method can be applied to students of different ages, starting from 7-8 years to adults. The following steps and conditions must be observed:

• the teacher presents or teaches a specific topic or topic;

• students are grouped in teams of 4 or 5 and study the topic chosen by the teacher;

• students who are part of a group are "high-level", "medium" and "poor" in terms of school performance;

• at the end of the group learning activity, the students are evaluated individually;

• after the first week, during which each team is awarded a score, the average scores for each student are calculated. Individual tests are applied;

• a team's score is calculated based on the progress of each student in relation to their previous results. Applying such an assessment, even "weak" students have a contribution to earning points for the group in which they were included. The students correct each other.

The team tournament (TGT – Teams/Games/Tournaments) is a combination of cooperation with the competition. Learning procedures are used in heterogeneous groups, what differentiates this method is that at the end of the learning cycle, a tournament takes place between teams.

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Students compete with colleagues from the other teams, trying to accumulate points for the team in which they are included. Since the competition is conducted between students who have the same level of knowledge and skills they have the opportunity to get points for their group, to feel responsible and valued as members of a team. In this method, cooperative learning is complemented by competitive appetizers, which have the role of stimulating the students' motivation to receive points for the team they are part of and strengthen the sense of belonging to the respective team (Ulrich, 2000, pp. 67-70).

1. Previous studies on student cooperative learning

In the following, we will present different specialized studies that show that the level of students' knowledge was increased when the methods of cooperative learning were applied to various school subjects.

Authors M. Leasa and A. Duran Corebima set out to investigate the effect of the cooperative learning model of "(Johnson & Duran Corebima, 2017) numbered heads together" (NHT) on the cognitive achievements of elementary school students in the natural sciences. Four core schools in the Sirimau district area were selected as the population of the study. The researchers chose the schools at random. The samples of the study were 100 fifth graders who enrolled in the 2016-2017 school year.

This study used a quasi-experimental design with non-equivalent pretest-posttest control group with factorial 2 x 2. There were two comparative NHT and conventional learning models, and two high and low academic skills. The results of the ana Cova test confirmed the difference in cognitive performance of students based on learning patterns and overall academic capacity.

The findings provide the following conclusions: 1) NHT has 72.45% more potential to improve cognitive performance than the conventional learning model. 2) The cognitive performance of students with high academic abilities is 30.03% different from students with low academic abilities.

The authors M. Eyayu and M. Muche, (Eyayu & Meseret, 2018) made a study that had as the main objective the evaluation of the impact of cooperative learning methods on the academic performance of students and laboratory competence in the discipline of biology. Data on these variables were collected from 369 students and 18 biology teachers from three schools. Biological tests and a semi-structured questionnaire were used to collect the data.

One of the conclusions reached by the authors M. Eyayu and M. Muche is the following: considerable increases in the acquisition of biology knowledge and in laboratory competence were noted in the students exposed to the cooperative learning achievement division (CLAD) through successive score tests, followed by the cooperative discussion group (CDG), and lower performance was recorded by individual learning (IL). Another conclusion is: the sample of respondents perceived that cooperative learning methods (CLADs), especially the cooperative learning achievement division (CLAD), offered higher learning gains in biology.

And in terms of mathematics lessons, various studies were carried out. Thus, the authors proposed that, through the study they conducted, to investigate the effects of cooperative learning methods and collaborative learning techniques in terms of the knowledge acquired by ninth graders in mathematics. The questionnaires conducted for this study were applied to the ninth graders for 4 hours during the second semester. In this experimental study, pre-tests and post-tests were applied to an experimental group and a control group. (Gokkurt, et. al., 2012) As a result of this research,

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it has been observed that there is a significant difference between the levels of acquisition of knowledge within the experimental group, where cooperative learning has been applied, and within the control group, where traditional learning methods have been applied.

The article entitled *Effects of Cooperative Learning and Problem-solving; Students Achievement in Social Studie*s and published by Babatunde (Babatunde, 2008) concluded that cooperative learning strategies are much more effective than other instructional strategies. Both boys and girls had the best results when cooperative learning methods were applied.

This article investigated the effects of three learning strategies (cooperative learning, problem-solving, and conventional strategies) on the outcomes of middle school students in the social sciences. The design used for this study was a quasi-experimental design unrandomized by the pre-test, post-test control group. 150 students (80 boys and 70 girls) from Nigeria participated in the research. The results obtained showed that the students who were exposed to cooperative learning had better results than those who were part of the other groups.

We can also mention here a study on cooperative learning methods developed through the application of PBL, in the field of economics (de la Torre-Neches et. al.2020). This case study aims, among other things, to highlight cooperative learning within working groups during the implementation of project-based learning. Regarding cooperation, the authors show that although cooperation had positive results on the learning process, and the students used their knowledge, skills, and aptitudes to carry out the project, learning from each other, there were also conflicts arising from differences of opinion, the lack of willingness of some to cooperate or in the dynamics of the group to share tasks.

1. Methods of research

The objective of the work

We aim to identify the relationships that exist between the efficiency of group activities as opposed to individual ones and the level of students' school results.

Working hypothesis

It is presumed that there is a positive correlation between the efficiency of the activities carried out in groups as opposed to the individual ones and the level of school results of the students.

1.1. Lot of participants

The research was attended by 30 students, aged between 17 and 19, who were in class XII. Only one participant (3%) is 17 years old, 3 (10%) are 19 years old and the rest, respectively 26 (87%), are 18 years old (Figure 1). In terms of respondents' gender, 14 (47%) are girls and 16 (53%) are boys (Figure 2). Most pupils come from urban areas, with 24 (80%) and 6 (20%) from rural areas (Figure 3).

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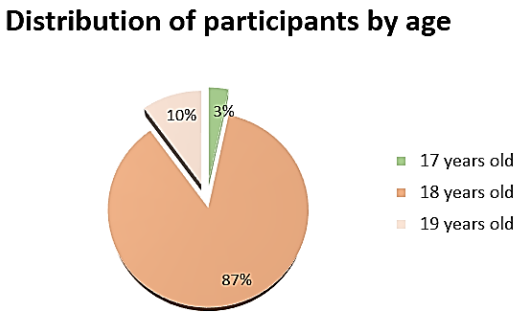

Figure SEQ Figure * ARABIC 1. Distribution of participants by age

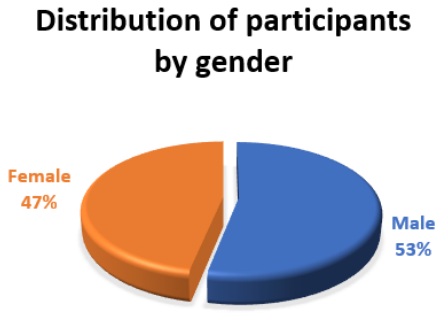

Figure 2. Distribution of participants by gender

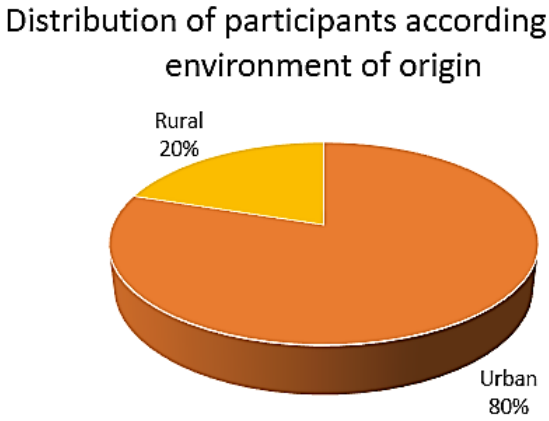

Figure 3. Distribution of participants according to their background

1.2. Tool used

This study concerns the frequency of application of cooperative learning methods and the effectiveness of these in the class of students. To carry out the study, we applied a questionnaire of 15 questions, of which 11 are closed questions, 2 are mixed questions, and 2 are open. For closed questions, the Likert scale was used, with the following variants of the answer: to a very large extent, to a large extent, appropriate, to a small extent and to a very small extent.

1.3. Experimental design of research

The questionnaire was conducted and applied between March and April 2022. The data were entered into the SPSS program, processed, and interpreted.

1.4. Ethical requirements

The students surveyed were invited to participate in this study by filling in the form. The answers given will not be rated as "right" or "wrong", so participants were encouraged to respond as honestly as possible.

Respecting anonymity: This research complies with international ethical norms regarding the confidentiality of the data collected in the study, as well as the safety of the participants.

No personal data such as name will be collected, with the answers given being entirely anonymous.

The average time required to complete the form: 5 minutes.

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Withdrawal from research: Participation is voluntary, with students having the option to withdraw from study at any time without any negative consequences.

1.5. Verification of the working hypothesis

From table 1 it can be found that there is a correlation between the efficiency of the activities carried out in groups as opposed to the individual ones and the level of school results.

Table 1. The positive correlation between the efficiency of the activities carried out in groups as opposed to the individual ones and the level of students' school results.

Correlations

		To what extent do you consider group activities to be more effective than individual activities?	To what extent do you consider that the level of your school results/knowledge was better due to the involvement in teamwork?
To what extent do you consider group activities to be more effective than individual activities?	Pearson Correlation	1	,632**
	Sig. (2-tailed)		,000
	N	30	30
To what extent do you consider that the level of your school results/knowledge was better due to the involvement in teamwork?	Pearson Correlation	,632**	1
	Sig. (2-tailed)	,000	
	N	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

2. Calculation of starting indices for variables studied with interpretations

Question 1

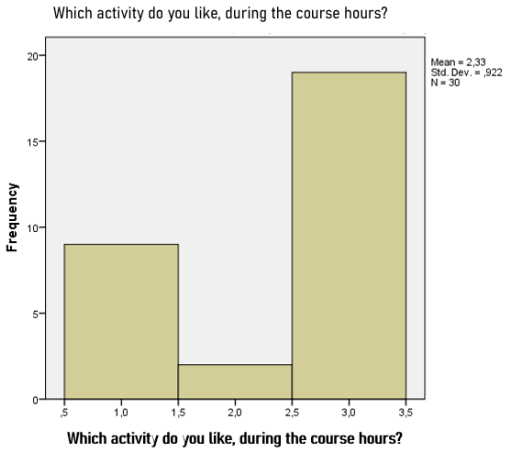

Figure 4. Graphical representation on the frequency of answers to the question "Which activity do you like during class hours?"

Table 2. Calculation of frequencies for the question:

Which activity do you like, during the course hours?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	working alone	9	30,0	30,0	30,0
	working with the whole class at the white board	2	6,7	6,7	36,7
	working in groups	19	63,3	63,3	100,0
	Total	30	100,0	100,0	

re type of activity is to your liking "most of the red "by groups", the preference for individual

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activities was manifested by 30% of the participants, who chose the option "when you work alone", and 3.3% of the respondents prefer the activities carried out with the whole class, given that they have selected this option.

One can easily notice the preference of students to work in small groups, to the detriment of the activities carried out individually and those with the whole class, this demonstrating that students are involved to a much greater extent in the learning process when they can interact with the colleagues of the group to which they belong.

Question 2

Question number 2 is an open one and is the following "For what reason do you prefer the type of activity you chose in the previous question?". The reasons why students prefer to carry out a certain type of activity are:

The students who chose the option "when you work alone – individually" indicated the following arguments:

- fewer sources of distraction;
- greater power of concentration;
- silence;
- self-assessment capacity;
- higher productivity.

The students who chose the option "when working with the whole class – frontal" indicated the following arguments:

- preference for games carried out in the framework of frontal activities
- sharing opinions, points of view and solutions.

The students who chose the option "when you work in small groups – by groups" indicated the following arguments:

- help from colleagues within the group;
- ease of communication;
- efficiency;
- bonding with friends;
- the usefulness of teamwork throughout life;
- cooperation;
- the amplitude of activities;
- presentation of multiple ideas;
- entertainment;
- social;
- a better understanding of the subject matter taught.

Question 3

To the question "During the classes, to what extent do the teachers turn to the group activity" most of the participants in the research, respectively 70%, answered "to a small extent", "according" 23.3% of the participants answered, and the variants "to a large extent" and "to a very small extent" were chosen equally by 3.3% of the respondents.

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It can be found that many of the teachers do not resort to group activities, even though this type of activity is to the students' liking. I believe that one of the reasons why teachers only very rarely resort to cooperative learning is the fact that they prefer classical teaching, namely the frontal one, which is not as time-consuming as group activities, where "bustle" is also created in the classroom, which could attract the attention of the other teachers within the school.

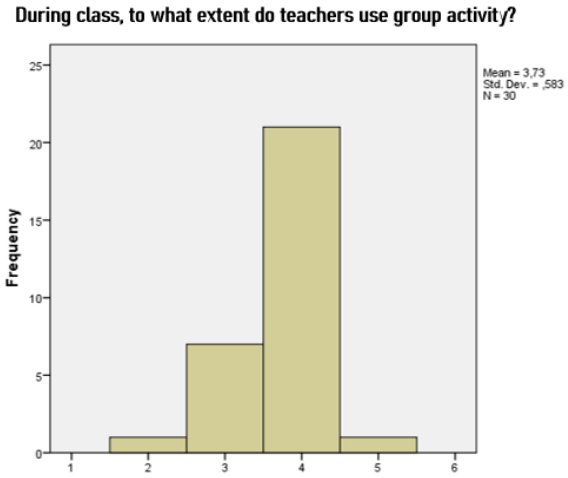

Figure 5. Graphic representation on the frequency of answers to the question "During classes, to what extent do teachers resort to group work?"

Table 3. Calculation of frequencies for the question:

During class, to what extent do teachers use group activity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	1	3,3	3,3	3,3
	to a great extent	7	23,3	23,3	26,7
	appropriately	21	70,0	70,0	96,7
	to a small extent	1	3,3	3,3	100,0
	to a very small extent	30	100,0	100,0	
	Total				

Question 4

Figure 6. Graphic representation on the frequency of answers to the question "To what extent do you like group activities?"

Table 4. Calculation of frequencies for the question:

To what extent do you like group activities?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	5	16,7	16,7	16,7
	to a great extent	13	43,3	43,3	60,0
	appropriately	9	30,0	30,0	90,0
	to a small extent	2	6,7	6,7	96,7
	to a very small extent	1	3,3	3,3	100,0
	Total	30	100,0	100,0	

n "To what extent do you like the activities carried out in groups?" it can be found that 43.3% of the participants answered "to a large extent", "according"

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30% of the participants answered, 16.7% answered "to a very large extent", the answer "to a small extent" being chosen by 6.7% of the respondents, and the variant "to a very small extent" by 3.3% of the respondents.

From the answers to this question, the preference for group activities is manifested by more than half of the participants, those who prefer a different type of activity being only 10%. This is a clear indication that students want to approach cooperative learning in the teaching-learning process.

Question 5

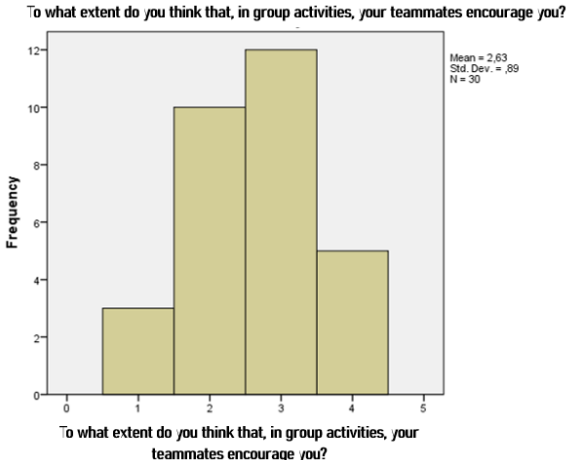

Figure 7. Graphical representation on the frequency of answers to the question "To what extent do you think that, in group activities, your teammates encourage you?"

Table 5. Calculation of frequencies for the question:

To what extent do you think that, in group activities, your teammates encourage you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	3	10,0	10,0	10,0
	to a great extent	10	33,3	33,3	43,3
	appropriately	12	40,0	40,0	83,3
	to a small extent	5	16,7	16,7	100,0
	to a very small extent	30	100,0	100,0	
	Total				

To the question "To what extent do you consider that, in group activities, your teammates encourage you?" the answer with the highest percentage is "appropriate", respectively 40%, 33.3% of the respondents chose the option "to a large extent", 16.7% answered "to a small extent", the "to a very large extent" version was chosen by 10% of the participants. It can be found that none of the respondents chose the option "to a very small extent".

From the answers to this question, it can be concluded that one of the reasons why cooperative learning is preferred by students is that they feel encouraged by their teammates, which makes them more easily express their ideas in front of their teammates and have a more open attitude. The students depend on each other in a positive way, and the positive interdependence that is created leads the students to an attitude of devotion to the group in which they are included.

Question 6

This question is a mixed one and is the following "What is the reason why you like group activities?". The answers to the question were as follows: you communicate more easily with your colleagues, you share/find out different opinions/points of view, you learn certain things more easily and you have fun. Being a mixed question, participants had the opportunity to express their own reason why they prefer group activities over those mentioned above.

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From the answers to this question, it can be found that the main reason why students prefer group activities is that they could share various opinions / points of view, 12 respondents choosing this option. The "I have fun" version was chosen by 10 of the students, 4 students chose the "communicate easier" option and 4 the "learn easier" option. None of the respondents has given their own reason for preferring group activities.

Question 7

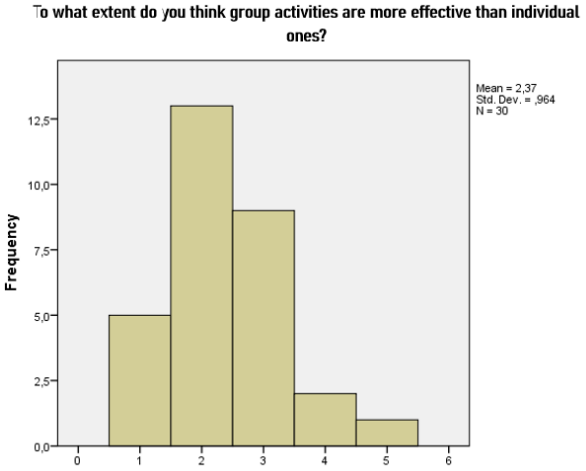

Figure 8. Graphical representation on the frequency of answers to the question "To what extent do you consider group activities to be more effective than individual ones?"

Table 6. Calculation of frequencies for the question:

To what extent do you think group activities are more effective than individual ones?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	5	16,7	16,7	16,7
	to a great extent	13	43,3	43,3	60,0
	appropriately	9	30,0	30,0	90,0
	to a small extent	2	6,7	6,7	96,7
	to a very small extent	1	3,3	3,3	100,0
	Total	30	100,0	100,0	

Regarding the answers to the question "To what extent do you consider that group activities are more effective than the individual ones?" it can be seen that 43.3% of the participants answered "to a large extent", "according" 30% of the participants answered, 16.7% answered "to a very large extent", the answer "to a small extent" being chosen by 6.7% of the respondents, and the "to a very small extent" version by 3.3% of respondents.

The point of view of most of the students surveyed is in favor of the efficiency of the group activities, in relation to those carried out individually. Corroborating these answers with those of the previous question, which concerned the reasons why group activities are to the students' liking, the following can be argued: the possibility that students must share their personal opinions, the fact that they relax within the classes and that the communication process is easier has therefore the efficiency of learning through cooperation.

Question 8

This question is a mixed one and is the following "How do you manipulate your attitude of cooperation within the group in which you are included?". The answers to the question were as follows: I communicate with the members of the group, contribute ideas and solutions to the achievement of the group task, I respect the rules of the group and I accept the ideas/opinions of my group colleagues. Due to the nature of the question, the participants had the opportunity to

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specify how they manifest their attitude of cooperation, indicating a different answer of their own than those shown.

Analyzing the answers to this question, it can be found that 19 of the respondents specified that the way in which they manifest their attitude of cooperation within the group is represented by the fact that they contribute ideas and solutions to the achievement of the group task, 5 selected the answer "communicate with the group members". Both the "I respect the rules of the group" and "I accept the ideas/opinions of the group colleagues" were chosen by 3 students each. None of the respondents indicated a response other than those mentioned above.

Since more than half of the students chose the option "contribute ideas and solutions to the achievement of the group task" demonstrates that the students are eager to express their points of view in a direct way, and the activities carried out in the group give them this possibility. In contrast, the possibility of contributing ideas and solutions is much narrower in the frontal activities, as a class of students consists of 30 children.

Question 9

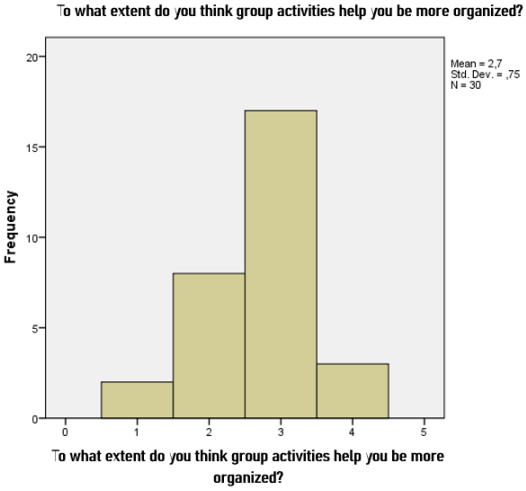

Figure 9. Graphic representation on the frequency of answers to the question "To what extent do you think group activities help you to be more organized?"

Table 7. Calculation of frequencies for the question:

To what extent do you think group activities help you be more organized?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	2	6,7	6,7	6,7
	to a great extent	8	26,7	26,7	33,3
	appropriately	17	56,7	56,7	90,0
	to a small extent	3	10,0	10,0	100,0
	to a very small extent				
	Total	30	100,0	100,0	

To the question "To what extent do you think group activities help you to be more organized?" 56.7% of the respondents chose the "right" option, the "largely" version was chosen by 26.7% of the respondents, "to a very small extent" 10% responded, and 6.7% answered "to a small extent". Only 6.7% of respondents chose the option "to a very large extent".

Another advantage of cooperative learning is represented by the fact that this type of learning helps students to be more organized, given that 90% of the respondents chose the answer options "to a large extent", "to a very large extent" and "appropriate", only 3 of the students appreciating that the group activities help you in this regard to a small extent. Thus, when working in a team, students' better dose the time they have available to solve a task and work more efficiently.

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Question 10

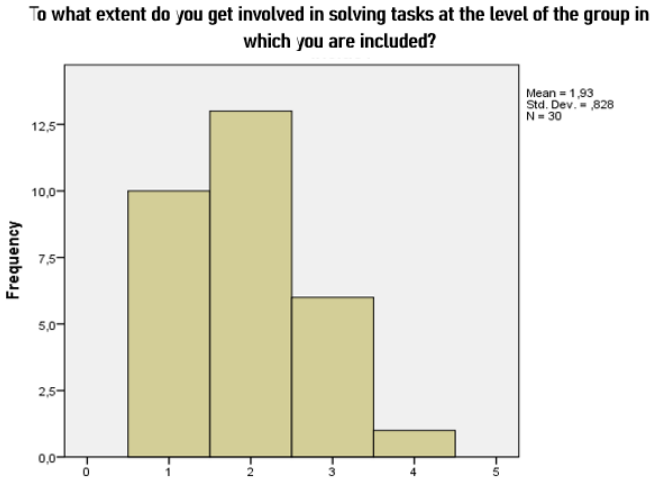

Figure 10. Graphical representation on the frequency of answers to the question "To what extent do you get involved in solving tasks at the level of the group in which you are included?"

Table 8. Calculation of frequencies for the question:

To what extent do you get involved in solving tasks at the level of the group in which you are included?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	10	33,3	33,3	33,3
	to a great extent	13	43,3	43,3	76,7
	appropriately	6	20,0	20,0	96,7
	to a small extent	1	3,3	3,3	100,0
	to a very small extent				
	Total	30	100,0	100,0	

To the question "To what extent do you get involved in solving tasks at the level of the group in which you are included?" the answers were the following: "to a large extent" – 43.3% of respondents, "to a very large extent" – 33.3%, "suitable" – 20% and "to a small extent" – 3.3%. The answer option "to a very small extent" was not chosen by any participant.

What emerges from the answers to the previous question is that the students are broadly and very much involved in solving the tasks they have to accomplish within the group to which they belong, given that these two answers were selected by about 80% of the students surveyed. This could be explained by the fact that, within a group, a student represents a quarter of a group of 4 students, instead of representing the 30th part of a class of 30 children. Thus, a student is no longer put in a position to wait for 29 other potential participants to present their point of view and can do so much faster.

Therefore, if a teacher wants the students to be more involved in the teaching-learning process, it is necessary to resort to cooperative learning methods.

Question 11

To the question "To what extent do you consider that, in group activities, your teammates remove you?" the answers offered were the following: 50% "to a small extent", 40% "to a very small extent" and 10% of the respondents chose the "right" option. The variants "to a very large extent" and "to a large extent" received no answer.

The answers received to this question demonstrate, once again, the fact that students interact much better within a group than if the activities were carried out frontally. Teamwork has, among

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other things, the role of amplifying the team spirit and creating deeper and warmer relationships between the peers of a class of students, not to distance them from each other.

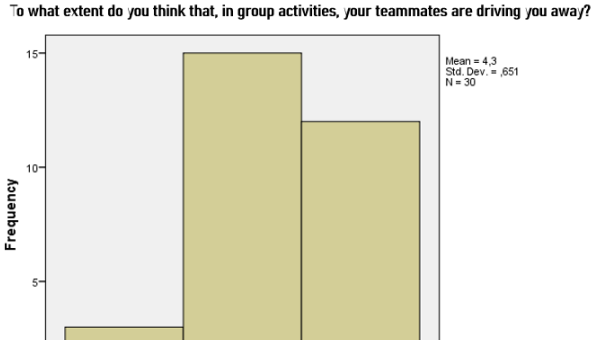

Figure 11. Graphical representation on the frequency of answers to the question "To what extent do you think that, in group activities, your teammates are driving you away?"

Table 9. Calculation of frequencies for the question:

To what extent do you think that, in group activities, your teammates are driving you away?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	appropriately	3	10,0	10,0	10,0
	to a small extent	15	50,0	50,0	60,0
	to a very small extent	12	40,0	40,0	100,0
	Total	30	100,0	100,0	

Question 12

Question number 12 is an open one and is the following: "What is the atmosphere that prevails in the group in which you are included?". The research participants described the atmosphere within the group to which they belong as:

- quiet atmosphere, the group being a cooperative one;
- work atmosphere, but still friendly;
- predominantly serious atmosphere, followed by a friendly atmosphere, full of jokes that have the role of increasing the yield;
- soothing, relaxing atmosphere;
- relaxed atmosphere, due to jokes, but there are also groups in which the atmosphere is tense, focused on activity, and in these types of groups predominate boredom, lack of motivation, similar to the atmosphere during individual study;
- cheerful atmosphere;
- predominantly serious atmosphere, but also fun;
- atmosphere in which all members of the group have the opportunity to express their point of view;
- communicative atmosphere, in which ideas and solutions are proposed, but also have fun;
- often it is a pleasant atmosphere, but disturbing things can also happen;
- fun and educational atmosphere (members of the group learn from each other);
- working atmosphere, in which everyone fulfils their tasks, but there are also situations in which certain colleagues do nothing;
- dynamic atmosphere, in which intrigues may occur, but they easily overcome themselves;
- atmosphere favorable to classes;

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- pleasant atmosphere, sometimes exhausting because of the energy of each one;
- working atmosphere, in which tasks are divided equally, so that all colleagues are satisfied;
- creative, encouraging atmosphere;
- an atmosphere in which members share their ideas and respect their opinions, even if they are different;
- atmosphere in which group members help each other;
- pleasant atmosphere with many topics of discussion;
- atmosphere in which usefulness and pleasure are combined, given that teamwork is transformed into an interactive and fun activity.

Question 13

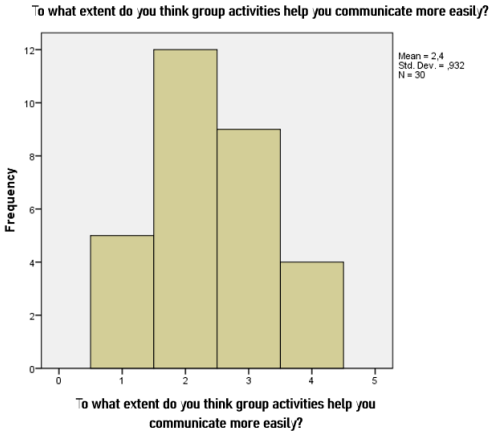

Figure 12. Graphical representation on the frequency of answers to the question "To what extent do you think group activities help you communicate more easily?"

Table 10. Calculation of frequencies for the question:

To what extent do you think group activities help you communicate more easily?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	5	16,7	16,7	16,7
	to a great extent	12	40,0	40,0	56,7
	appropriately	9	30,0	30,0	86,7
	to a small extent	4	13,3	13,3	100,0
	to a very small extent				
	Total	30	100,0	100,0	

To what extent do you think group activities help you communicate more easily?" the research participants answered 40% with the variant "to a large extent", 30% "suitable", 16.7% chose "to a very large extent" and 13.3% answered "to a small extent". It can be found that none of the persons questioned responded with the option "to a very small extent".

Communication is a key element when teamwork is brought up. This can also be seen from the answers to the previous question, which is an open one and in which the participants were asked to describe the prevailing atmosphere in the group in which they are included. Thus, the atmosphere in a group has been described as: an atmosphere in which all members of the group have the opportunity to express their point of view; a communicative atmosphere, in which ideas and solutions are proposed, but also entertained; an atmosphere in which members share their ideas and respect their opinions, even if they are different; a pleasant atmosphere with many topics of discussion.

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Question 14

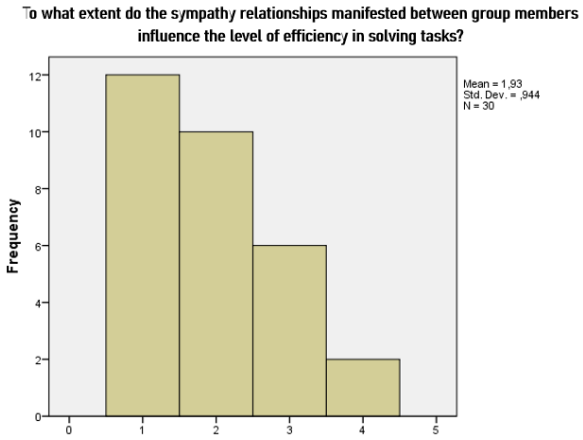

Figure 13. Graphical representation on the frequency of answers to the question "To what extent do the sympathy relationships manifested between group members influence the level of efficiency in solving tasks? "

Table 11. Calculation of frequencies for the question:

To what extent do the sympathy relationships manifested between group members influence the level of efficiency in solving tasks?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	12	40,0	40,0	40,0
	to a great extent	10	33,3	33,3	73,3
	appropriately	6	20,0	20,0	93,3
	to a small extent	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

To the question "To what extent do the relationships of sympathy manifested between group members influence the level of efficiency in solving tasks? " The answer with the highest percentage is "to a very large extent" - 40%, 33.3% of the respondents chose the "largely" variant, 20% the "right" variant and 6.7% the "to a small extent" variant. No response was received with the option "to a very small extent".

The class of students is a social group and within it, as in any other group, relationships of sympathy, antipathy, indifference, etc. Are created, the students collaborating better only with some of them, and towards others showing indifference. It is easy to understand that within the group where relationships are sympathetic, solving work tasks has a smoother path, and the level of efficiency is higher.

Question 15

To the question "To what extent do you think your level of school performance/knowledge has been better due to your involvement in teamwork?" 36.7% of the research participants responded, "to a large extent", 23.3% chose the variant "to a very large extent", 16.7% "to a small extent". The "to a very small extent" response was selected by 13.3% of the people surveyed, and 10% responded "appropriately".

Given that more than half of the research participants believe that the level of school results was better due to the involvement in teamwork, it can be concluded that the process of teaching-

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learning also takes place when a teacher is not directly involved, the students learning from each other from the knowledge previously acquired from books read, from personal experiences, etc.

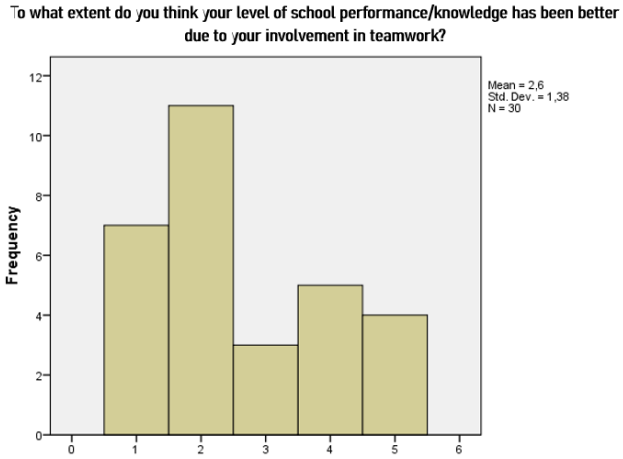

Figure 14. Graphical representation on the frequency of answers to the question "In what do you think your level of school performance/knowledge was better due to your involvement in teamwork?"

Table 12. Calculation of frequencies for the question:

To what extent do the sympathy relationships manifested between group members influence the level of efficiency in solving tasks?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	to a very large extent	12	40,0	40,0	40,0
	to a great extent	10	33,3	33,3	73,3
	appropriately	6	20,0	20,0	93,3
	to a small extent	2	6,7	6,7	100,0
	to a very small extent				
	Total	30	100,0	100,0	

Conclusions

Taking into account both the theoretical concepts regarding cooperative learning, which were presented in the introductory part of this paper, and the answers that were obtained by the students who answered the grid of 15 questions, taking into account also the results obtained from the specialized studies to which we have previously referred, it can be concluded that when the methods of cooperative learning are applied, the degree of acquisition of knowledge is higher, and school results are visibly better.

Among the reasons why students prefer to work in small groups are the following: help from colleagues within the group; ease of communication; efficiency; bonding with friends; the amplitude of activities; presentation of multiple ideas and a better understanding of the matter taught. At the same time, students prefer cooperative learning because they feel encouraged by their teammates, which makes them express their ideas more easily and have a more open attitude. The students depend on each other in a positive way, and the positive interdependence that is created leads the students to an attitude of devotion to the group in which they are included.

Cooperative learning also helps students to be more organized. When working in a team, students' better dose the time they have to solve a task and work more efficiently.

More than half of the students surveyed said that when working in groups they contribute ideas and solutions to the achievement of the group task, which proves that the students are willing to express their points of view in a direct way, and the activities carried out in the group give them this possibility. In contrast, the possibility of contributing ideas and solutions is much narrower in the frontal activities, since a class of students consists of 30 children and one student is no longer put in a position to wait for another 29 potential participants to express their point of view and can

do so much faster. Thus, if a teacher wants the students from the class, he teaches to be more involved in the teaching-learning process, it is necessary to resort to learning methods through cooperation.

Despite all the reasons given above, it was found from the students' responses that teachers rarely resort to cooperative learning. From our point of view this happens because teachers prefer classical teaching, respectively the frontal one, which is not as time-consuming as group activities, where "bustle" is also created in the classroom, which could attract the attention of the other teachers within the school.

The use of cooperative learning strategies is best suited regardless of the subject to be taught. From the results of the study conducted it can be easily seen that both girls and boys have an improved learning capacity if they are exposed to several teaching strategies. Moreover, if we want to improve learning skills it is necessary to apply cooperative learning in schools.

In view of the above, it is advisable to discourage the idea of limiting teaching methods to conventional ones. Teachers should encourage teamwork among students for them to work in a cooperative way. It must demonstrate a good sense of observation and lead the work of the students, alleviate the conflicts that may arise within the working groups and encourage good cooperation of the students to achieve the objectives set.

Teachers are recommended to be more creative in designing learning using various types of cooperative learning models. Schools are also being asked to create a better, more cooperative learning environment to avoid unfair competition between students in the classroom and, as a result, to improve students' academic capacity.

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