

METHODS OF COOPERATIVE LEARNING AND THEIR APPLICATION IN THE DEVELOPMENT OF COMPETITIVE THEMES IN TEACHING MATHEMATICS

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ABSTRACT

Contemporary changes in the whole system of education and training require the teacher to be a person of trust, educator, counselor, friend, organizer, coordinator, associate, innovator, assessor, mentor; in another words, a contemporary and modern person. In the modern school (even more in the future) the role of the teacher is far wider. He needs to be active in school, outside of school, within free activities, as well as cultural and public activities of the school. A good teacher does not resist the influence of a student, because his or her extremely responsible role can be successfully achieved, if they work well with them. To cooperate in this context does not mean that only the teacher listens to the student's suggestions, although that is also very important, but cooperating means accepting the student's proposal, if they are objectively acceptable or explain why a particular proposal cannot be realized. It is not possible to work well and democratically in the classroom if the student's influence is not accepted. If the teacher's behavior and style of work are not necessarily limited to the work and behavior of a student, then there is no interaction, and the teaching process must be an interaction.

Changes in the society affect school changes, and changes in school play the most important role in changing the position of the teacher and his role and the style of work in the teaching process. The survival and future of the school is reflected in its educational role. In order for a teacher to be an educator, to fulfill his or her educational role, he/she must love or sympathize with the kids, respect their opinion, encourage them to achieve good results, but also to share with them possible misunderstandings and failures. The success and superiority of teachers as educators depends more on the quality of the relationships established, and less on the knowledge of the subject being taught, even though this component cannot be ignored. Thanks to the good work style, the teacher can achieve better results in the educational process. This does not only apply to the choice of working methods, but the style of work is reflected in the overall individual pedagogical practice of teachers. In the style of work the teacher expresses his / her independence, creativity, initiative, democracy or authoritarianism, lack of competence, irresponsibility.

In modern school, children need to play a central role, and the school should become a place where they are exploring, examining, solving problems and to lead them to a deliberate dialogue. Students need to experience the school as a place where the child develops in cognitive, emotional and social sense, and where the child's motivation to work is at a high level.

Active teaching (active learning, active school) is an original pedagogical creation based on theoretical settings and practical attempts of transformation of a traditional school into an active school, i.e. a school in which both the student and the teacher have an active role. Thinking about active learning is inspired by the works of Kerenstahner (work school), Laj, Dekrol (school for life and life), Klapard (school by sea), Djuij (pragmatic conception), Montesori, Fereira (active school) Frenoa, Dalton plan, Vinteka-plan, etc.

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The summary of their research endeavors and theoretical endeavors, aimed at constituting an active school, is the following Piaget's statement, which for active teaching has an absolute programmatic meaning: "In one of the words, the basic principle of active methods should be inspired by the history of science and can be expressed in the following way: Something means self-discovery or reconstruction through re-discovery and it is necessary to adhere to that principle if in the future we want to shape people who will be capable of producing and creating and not just repeating what already exists. "

To reach a comprehensive and precise concept of active learning, the activity of children in the learning process is of paramount importance. From the cited Piaget's theoretical point of view, for the active learning, three are very important elements:

An important component of activity as an internal (mental) activity is defined: this activity (or at least one of its, important for school learning) is the passage through the intellectual processes through which it came to science when it came to discoveries and finds. So, the student briefly reconstructs these thought processes;

The object of thought activities is not only their own immediate experience but also the intellectual content of certain scientific disciplines;

The basic goals of school learning through active methods are: a good understanding of what is in science but also the adoption of intellectual arts for productive and creative activities.

The traditional school works on pre-defined plans and programs and the goal of the curriculum is to adopt the program.

The basic teaching method is the lecture (verbal transfer of knowledge) with the occasional use of teaching resources.

The student has a mostly passive role of a listener who has to understand, remember and reproduce the compulsory material. Evaluation, whether verbally or in writing, consists in verifying the measure in which the required degree has been adopted. Learning motives are largely external to nature (appreciation, praise, reward, punishment ...) In a traditional school, the child is looked upon as a pupil, that is to one who should, with understanding, repeat the course more profoundly.

An active school is more focused on a young man who is treated as a whole person whose intellectual potentials need to engage more in the teaching process. The active school is based on compulsory education standards based on which the orientation plans and work programs are designed. Such access also implies a part of teaching that is flexible and varies depending on the student's interest. Learning motivation is personal (internal).

In teaching, active learning methods are based on work and intellectual engagement of students and research activities.

The goal of an active school is not only the adoption of a curriculum, but also the versatile personality development of students. The active school evaluates not only the degree of competence of the knowledge defined by the educational standards, but also the progress of the children in comparison with the initial situation, the motivation and interest of the students for work and activity, the development of the personality and the satisfaction of the student's teaching that is realized.

Key words: Mathematics, Learning. Co-operation, Classes

INTRODUCTION

Cooperative learning is the topic of a large number of research both in the world and in our country. The focus of these researches is on achievements, interpersonal relationships and mental health. Participants in research differ according to age, ability, gender, race, nationality, socio-economic status etc. Different tasks, models and techniques of cooperation were used. Research has been conducted by researchers of different theoretical orientations in different conditions and over a long period of time. This research, in addition, has such validity and trust, which can be rarely found in pedagogical and psychological literature.

In the broadest sense, cooperative learning can be defined as any learning situation in a classroom where students of all levels of achievement work in structured groups to achieve a common goal. Cooperative

learning is also defined as the use in teaching small groups where students work together to achieve the maximum, both their own and the groups they work with. In these groups they are negotiating, initiating, planning and evaluating each other. Instead of working individually and competing with each other, students are responsible for building a community in which all students participate. Co-operative learning requires that students work together to achieve goals that as individuals do not achieve. Students involved in cooperative learning have many social and academic benefits.

The experience of cooperation and the interactive exchange of information that occurs during cooperative learning has the consequence of having a better memory of teaching contents, improving attitudes towards learning and strengthening interpersonal relationships among group members.

The role of the teacher

At the beginning, the teacher carefully designs the tasks that require the active participation of each student in the group in order for the assignments to be accomplished. At the beginning of the cooperative work, the teacher explains the task. When the group starts working on the task, the role of the teacher is to encourage and orient, he/she moves from group to group and follows the learning process. He/she provides students with feedback and assesses the progress of the group.

Compared to the traditionally understood and applied work in small groups, cooperative learning has its own authentic features, and hence the following teaching situations cannot be classified as co-operative learning:

A teaching situation in which students work at the same desk on individual assignments,

A teaching situation in which students work on individual tasks and more capable students help the less capable,

The teaching situation in which one student works on everything while the other students in the group are passive and mostly rely on active student's work,

The teaching situation of the group work of a student in which the teacher often and almost completely manages the student's work and gives very strict instructions for work and where is no genuine student co-operation,

A teaching situation in which students have not developed social skills of open and effective communication and where there is no real exchange of student's opinions, ideas and the solution of the problems of the group work,

The teaching situation in which students work team-minded, but know that the teacher will evaluate their work individually.

In these situations, which are very characteristic of traditionally understood work in small groups and can be seen in the teaching process, the inefficiency and inadequate level of activation of all students in the classroom are noticed. In these situations, the activity of a few students is evident, while other students remain passive and generally "buy" baked knowledge. For such situations we say that the process of learning has not really begun, and most often, the acquired knowledge is mechanically unmanaged, with a low degree of functionality. This will certainly not positively influence and contribute to the achievement of the goals of cooperative learning, such as high levels of student achievement, the formation of a positive

relationship to a particular curriculum, the development of a critical thinking of students and the like.

Teachers should try to create a class organization that will encourage student interaction with the goal of mutual cooperation. Co-operation and interaction among children can be encouraged by the introduction of collaborative groups. In the following, we will present several models of collaborative groups, i.e. ways of organizing student work in the teaching of mathematics (Rešić, Šehanović; 2017)

POSITIVE INTERDEPENDENCE is the first and most important element in cooperative learning.

Group members feel they are interconnected because they are pushing for a common goal.

To have one group succeed, every individual in it must be successful, and vice versa.

This contributes to development of social skills, e.g.:

1. A more positive, tolerant and friendly relationship among peers;
2. A more positive attitude toward self-empowering self-confidence;
3. Readiness for Teamwork and Flexibility;
4. Discipline etc.

The goal of developing a positive interdependence is of utmost importance! Without it, co-transversal learning is not possible. Students should accept it as the most meaningful and most interesting.

The aim of cooperative learning is to advance each and every student, in different aspects (achievement, social skills, self-confidence, etc.). After participating in cooperative work, the members of the group should be trained to do the same or similar task independently.

Interaction "Face to face"

During group work, group members should have their faces face-to-face so that they can easily maintain contact with their eyes, in other words, close enough to be able to delineate the material, mutually talk quietly and share opinions without disturbing other groups work. Enhancing interaction is considered to be the forms of behavior that individuals encourage one another and help each other to make it easier to complete a group assignment. Through this interaction, students also build an academic and personal support system for each member of the group. Enhancing intra-group intractability is what has the strongest impacts on students' achievements, social relationships, social competence, and psychological adaptation.

Behaviors that characterize good communication are: mutual assistance, exchange of necessary teaching materials and resources, feedback to enhance the future work of members, consideration and questioning of the group's conclusions to improve the quality of the group as much as possible. In this context, relationships within the group are characterized by mutual trust and respect.

Exercising the social skills of students

To form groups of students who do not have the experience in group work, and therefore the social skills necessary for them, and require them to cooperate, is analogous to the situation in which an illiterate person is required to read a book. For group work to be effective, students must be taught in the appropriate social skills, such as: active listening, decision-making, allowing informal leadership in the group, conflict management, and the like. Numerous studies have shown that most primary and secondary school students lack basic social skills, such as the accurate identification of other people's feelings or the skill of discussing different topics. It seems that incompetence in this field continues in the adulthood.

Of course, it is not enough for a teacher to know that students need to adopt and practice social skills so that they can apply cooperative learning. They need to know what skills they are, how their disciples teach them and how they are continually refined. Generally, group work skills can be categorized into four broad categories, given the stages in the group's development. These are the skills:

Formation (basic skills needed to establish a group)

Functioning (skills needed to manage group activities to complete the task and maintain effective relationships among group members)

Formulation (skills to build a deeper level of understanding of the materials being studied in order to stimulate the application of strategies at higher levels of resonance as well as maximize the learning and application of the learned) and

Making waves (skills needed to engage students in cognitive conflict discussions to encourage reconsideration of knowledge, active search for information, giving reasons or arguments for conclusions, etc.)

The social skills learning process never ends. They need to be continually modified and perfected. Once students acquire the skills needed for group work, it

is sufficient for the teacher to see how the students behave, identify the desirable and undesirable behaviors, provide feedback to the students and intervene when necessary. Making a decision on when to intervene, and when leaving it to the group to find a solution on their own, is part of the teacher's teaching or teaching skills.

The evaluation of group processes

The easiest way to evaluate group processes is to look at groups while working on a common task. This is most often done by the teacher, with the help of an appropriate observation protocol in which the teacher understands the frequency of previously defined forms of behaviors. In the case of an unstructured protocol, specific behaviors that occur in the group are described.

Systematic observation allows teachers to gain a deeper insight into what is happening in the group. While listening to the students as they discuss during the joint work, he gains valuable information on how did they understood the instructions, how they understand the basic concepts and strategies they use while they master the subject, and what social skills they use, and how much a learner contributes to a group goal. In addition, the teacher may ask each student to evaluate their work and behavior by filling in a structured questionnaire. When students gain more experience in group work, the teacher can train them to be observers and assign each student a role in each group. In this way, the teacher can gather much more information on group functioning than when he does it alone, observing all groups at the same time.

After observation, the teacher evaluates group processes and provides feedback to each group. Finally, groups are given recognition for work and behavior to feel more competent and to contribute to the enthusiasm and motivation of students for future cooperative activities.

COOPERATIVE LEARNING IN TEACHING MATHEMATICS

So far, only a small number of researchers have carefully examined specific types of interactions that occur among students while learning math in smaller groups. Most of the interaction-related tasks identified among students are related to the help they seek or provide to each other (Gušović, 2013).

A great deal of concern among mathematicians is encountering the low recognition of students that they need help in learning math. Neumann and Goldin (Newman and Goldin, 1990) show that children, especially with lower opportunities, are reluctant to seek help when they have difficulties in learning math. They are most reluctant to seek help from their friends, mostly because of being afraid they will laugh at them. If they are to seek help, their main source is a teacher who is often unable to provide the appropriate assistance each pupil needs individually. Carefully designed subdivisions to smaller groups can enable interaction between students who, in turn, can provide appropriate assistance to the pupils who need it.

Unfortunately, most math lessons do not sufficiently promote student activity in tasks. What is more, full-time, as an environment in which students are not sufficiently active, has shown negative effects of low student achievement (Mulyn, 1992). By contrast, some small cooperative learning groups have shown that student work is increased and student interaction facilitated learning in small groups does not ensure automatic collaboration in work and positive effects in all students. For example, sometimes more capable learners by showing far more active behavior tend to dominate the less able learners. Although promoting math through co-operation in small groups makes it feasible for "highly productive students", the real challenge remains to do the same with "low productivity" students.

Levels of cooperation of students in teaching mathematics

The most commonly applied levels or forms of realization of cooperative learning in the teaching of mathematics are:

- Cooperative learning based on the department;
- Cooperative learning based on small groups, sub-groups or teams;
- Co-operative learning based on couples.

Cooperative learning based on the department

Although rarely mentioned in the literature, in the broadest sense, scholastic co-operation also encompasses the whole of the department. At this level, different teaching methods that support cooperative learning, such as storm ideas and the like can be ap-

plied.

Of course, it is not essential that co-operative approaches be represented at all times, which are suitable for the entire department. On the contrary, these methods are suitable for certain stages of work, such as: talk breaks used for discussion and active student learning, for introducing into a topic or problem, when discussing topics that are just present for discussion, asking questions, and interplay help with the materials that are just exposed.

Cooperative learning based on small groups, sub-groups or teams

Cooperative learning at this level takes place when small groups of students work on a common task that can only be solved by cooperation of all group members. The group work represents the sitting of students in smaller groups of 3 to 6 students. The best group of 4 students, because that communication is six-fold. Group composition can be permanent or changeable.

Students can be grouped in the following way:

- Pupils of similar abilities,
- Groups of students of different abilities
- Random choice of students in teams.

One of the most widespread methods for grouping students in the same class is grouping the same skills. Research shows that teachers are generally positive about this grouping of students. Many of them justify this way of grouping, based on the need to adapt the content of the time, pace, and teaching method to students of different abilities.

Mathematics is by nature "linear, structured, accumulated, serial, which makes it difficult to work with groups of students who differ by level of knowledge and abilities. Basic grouping questions in this way refer to "ability to learn math" and the hierarchical nature of the subject. Students' abilities are considered to be the main explanation for their different achievements in mathematics. Recent research, however, has shown that there is a doubt as to whether ability grouping is the right method for working with students with different abilities. It is generally considered that the school achievements of students in higher expectations groups are better than those students who are assumed to have similar skills but are placed in groups with lower expectations.

Co-operative learning based on couples

It has long been considered that learning in pairs is nothing more than learning in the smallest group. Working in pairs (tandem) is a transitional model of individual to more complex forms of work. We can say that work in couples is an innovative form of work in the contemporary teaching. By working in pairs, the students get better and the climate for work is more enjoyable, the student's activity is maximized, as feedback is even more encouraging for the activity. The student is trained to compare his work as well as to listen patiently to the interlocutor. This mode of work also has some shortcomings, such as restriction, rivalry, more time to get feedback on student work, etc. The solution needs to be sought in understanding the pair as a temporary form of joint work on a task or part of a task.

In math teaching, given the student's age, the nature and contents of the teaching material, work in pairs is mostly used in the form of interactive work and joint work. Working in pairs helps us, above all, to respond to the needs and the mood of the so-called; specific classroom students. Almost every department now has those students who at first glance stand out from others, whether they are gifted or have some difficulty in mastering the material.

Student pairs can be formed on a variety of criteria:

Gifted and less capable students

A couple of gifted students or a couple of less gifted students

Couples by interest

Pole different or identical pairs

Pairs according to the likeness of temperament and personality characteristics

Pairs of similar learning styles

It is not the case that the couples are drawn up according to the seating schedule, the student's agreement, the free standing of the individual, and the like.

Particularly suitable contents for this work in teaching math are those who have a lot of new terms, information, rules, definitions and content that require the practical application of certain knowledge.

METHODS

Anyone who has ever tried to organize a cooperative lesson from any subject knows that it is not easy, because it is necessary that the time is so designed to provide an active participation of all students.

Some of the leading pedagogues in this area have

devised methods used by teachers around the world. Some of these methods are taken from contemporary literature in this paper, some I have taken from the seminar "To Functional Knowledge Using Methods and Techniques in Interactive Teaching", and some are just ideas that need to be thoroughly considered. The aim is to provide teachers with as many methods as possible and more recent knowledge in this field. Of course, in applying this method it is possible to perform combinations or create an analogous own approach, depending on the specific conditions of teaching practice and teacher training. It has been shown that these methods develop apart from achievement, and cooperative quality of personality, favorable emotional climate in learning and a higher level of student motivation. The most important advantage of cooperative learning methods is their compatibility with traditional teaching. The teacher, therefore, does not have to abandon his previous experiences. Practice has shown that whoever tries these methods will definitely decide to continue to use them and will not go back to the old.

SELECTED IDEAS

Mosaic method and its variations

The mosaic method is one of the first strategies of cooperative learning. It was originally developed by Eliot Aronson and his colleagues at the University of Texas. Aronson has developed a mosaic method to address some of the school segregation problems of the 1970s in the United States when they were separated in black and white studs and there was very little interaction between pupils of different skin colors. Aronson has solved this problem by involving students in small, heterogeneous groups with a division of tasks and sources in which the pupils are doing so that each student has to rely on all the members of the group. This interdependence of the students was very high, and the role of the teacher as a provider of information was temporarily diminished.

The original mosaic method

The name "mosaic" expresses the essence of this cooperative learning strategy. The learning material is distributed to members of the group in the form of mosaics and a piece is given to members of the group. The zeal that is generated by the slicing of the material will not be solved until all the pieces are put together.

In essence, the responsibility of each member of the team is to process their piece of material and to teach the other. In other words, the mosaic method firmly binds pupils of materials and resources, as well as strongly motivates the interdependence of students in cooperative learning. A team member who is not efficient in the work on his or her piece of work can help other members of the team.

Although it is originally developed for the fifth and sixth grades of elementary school, the mosaic method can be applied for work in all grades of primary school, and children need to be able to read because most tasks in the mosaic method require a minimum reading ability. In the original mosaic method the students work in two groups: a control group (expert group) working together to produce a joint material and a mosaic group (the so-called homegroup) working on material that has just been learned from each group member individually in expert groups. The original mosaic method requires each mosaic group member to be part of one of the control groups working on the teaching material. The members of the control group have the same number of different mosaic groups. They work on the same teaching material, study information, discuss the method for working on the material. When the mosaic of the group is rebuilt, each student teaches others about his material he learned in his control group. While the mosaic method strongly relies on the task and resources as well as on the interdependence of group members, it is important to point out that this is essentially not a hierarchical method. The method does not require the same level of mastery for all students. Usually, students master the material that, as experts, convey to their mosaic group.

It is recommended to reduce the number of members of mosaic groups, depending on the number of topics for work. Team members can be selected so that one organizer-leader is found in each group for each mosaic group. It is important that the group organizer helps the group and forms the role of a team leader for other students in the group (because all must play that role). After two to three meetings, the roles of the team leader rotate and each mosaic group chooses a new leader. To be experts in their field, pupils are composed of members of the same mosaic groups who have the same questions, the same thing. Members of the matched or expert groups work together to understand the material and discuss how it is easier to master that piece to make the most of it to its mosaic group. Approximately 30% of time is spent on treat-

ing materials in the expert group. It is recommended that the leader of a mosaic group choose pre-work. If all the material is matched and done at the same level, it is possible to enable students in the expert groups who have completed their task to help others in their work on the design, as well as developing the ways of doing this themselves. In these circumstances, each expert group must be as heterogeneous as the mosaic group.

When they finish learning in expert groups, students return to their mosaic groups to teach others the curriculum, as specially arranged, if possible. Members of the group mosaic consider the material to ensure that each member understands. When the group ended up with the learning material, the time for discussion, analysis, and reflection followed. Proportionally, it is necessary to spend 60% of the time on the curriculum and 40% on the discussion. When they finish working in mosaic groups, students take individual tests and materials. The interaction task used in the mosaic method is to ensure that each student is fully successful on an individual test. This success depends on the individual's cooperation. Aronson and his associates did not foresee any form of reward within this method.

RESULTS

EXAMPLE:

This is the teaching unit with which students of the eighth grade of elementary schools meet. The very concept of treating the information is known to the students, both from the earlier classes and from life. This teaching unit is also a good proof that math is everywhere around us and that it is a very applicable science. There is also an opportunity to acquire functional (applicable) knowledge in which it is specifically insisted.

One example of this is when students are given data gathered in a survey and they are subdivided into expert groups first to learn how to process and display data (drawing tables, graphs, diagrams) and then return to their mosaic groups and train other students to present together files. We divided the students into groups of 4 students and each group gets a special assignment.

Namely, the students have visited the tourist destinations of our region as part of the project of learning geography and collected data on the number of visitors, number of foreigners, age structure, number of visitors in certain periods of the year and so on.

Now, at the math class, students received the data they were supposed to process and show to some of the statistical methods. Each group got one tourist destination.

The students pulled out one card marked with a number from 1 to 4. Then the students with the same number on the card formed the group. Then the captains of the groups form an expert group that has two tasks to learn how to make graphs and diagrams based on data written in the table using one of the Word tools and then teach other members of its mosaic group.

When they finish learning in their expert groups, students return to their mosaic groups. Each of the mosaic members of the group is obliged to transfer the knowledge they have acquired to the other members in order to ensure that each member understands. When the group has finished the learning material, it is time for questions, analysis, thinking, etc.

After completing the work in mosaic groups, each student gets tasks to work individually. Depending on the interaction within the group used in the mosaic method, each student will achieve some result on the individual test. If the group work was successful and the students cooperated with each other, then the results on the test would be as good as possible.

Method of Scoring-Achievement

This method has emerged as a practical application of learning theorists of motivation achievement. The essence of applying the scoring method is that the students know exactly what they are looking for, that they have time to prepare and that there are no surprise factors in checking the adopted knowledge.

After processing the teaching unit, students are given points for mastering the teaching contents. Points are given analytically. Any information, fact, or essential item is scored in brackets beside content with a predefined number of points, so that the students know how much points they are going to get by filling out this information. At the end of the teaching unit or topic, a score scale is awarded (for example, 21 points for grade 2, 31 for good and the like). The student does not know which questions will be on the test or on the test of knowledge.

Points - Achievement is very effective for group work. The class is divided into groups that are preparing for a few days or weeks to test the lessons learned. Group collaboration is followed. All members of the group are concerned that each group learner learns the best to make the group more successful. It is possible to organize various forms of competition be-

tween groups. The differences between the other cooperative methods and this is that the students know exactly what is being sought for the grade, and that grade will not be different from the teachers.

When working on teaching contents, the teacher should draw the students attention to important information and scoring. It is best to give the teaching unit a test question, in addition to which it is indicated where the answers are in the book or other source of knowledge, as well as how many points they carry. The teacher can use multiple forms of evaluation of achievement, depending on their assessment of the effects of this evaluation.

This type of evaluation should be applied which will most contribute to the further achievement of students:

Testing individual achievement when group work is used: the goal is to establish a group's achievement, and individual student contributions are valued only by a group. It is an important group assessment. A group rating is highlighted in a class chart, in a school newspaper or otherwise. It is important that a group is struggling for more achievement by training or "training" all its members for maximum individual scores;

Evaluating group achievement without individual scoring: the goal is to test groups rather than individuals. Testing for the group needs to be prepared.

Self-assessment of the group: The goal is to show the group's achievements in the curriculum and analyze the way to achieve the achievement.

DISCUSSION

Method of group research

Methods of group research have been developed by Sharan and Herz- Lazarowitz (Sharan and Hertz-Lazarowitz, 1980; Sharan and Sharan, 1992) as a variation of the project method. Orientation to developing intergroup collaboration and satisfying students' intersections. Topics can be suggested by students based on search by source or by self-propagation topic. Groups of 5 to 6 students are formed that will study the topic of their choice. The composition of the group is based on the theme selection. Each group discusses its topic and analyzes the aspects of a possible approach to the topic.

The first three questions should be answered first:

What will we do?

How will we do it?

Why will we do it?

Subsequently, the group conducts its research plan, which implies defining tasks for each member of the group. Group members search for sources of knowledge to better respond to the project assignment. Each group member should be aware that a better outcome of each individual will also mean a better result for the group. Each group should select one member for the Steering Board. The task of this committee is to monitor the group's progress, to ensure that each member of the group is engaged, to hear the group's plans for the final report, to draw up a list of final presentations and to consider the needs of each group. The whole group presents what it has done so that every member of the group has its role in the final report. The teacher helps students who do not know how to present their material. The entire class should be in good standing during the presentation of any group. It would be desirable for the presentations to include a part that points to difficulties in processing or investigating problems, as well as instruction to other students as best to overcome the topic considered.

The teacher is starting to evaluate during the observation of the students' work in the groups. It is necessary to evaluate how students have approached the subject and the problem of research, how they cognitively treated and which skills did they use. It is necessary to involve students in evaluation as much as possible or to develop self-evaluation. The Steering Board should be a group work assessor, but it is very important to carry out the evaluation of this committee's work. For the evaluation, the teacher can create a "group efficiency questionnaire" that will be filled out by all the students and processed by the board of directors.

Students should be divided into 5 groups of heterogeneous compositions with approximately equal number of members. Each of the groups will deal with one of the following budget items:

- Foods and beverages,
- Chemical products
- Home Appliances and Applied Techniques
- Wardrobe
- Monthly Accounts (Taxes)

The groups can agree on which items will be responsible or items may be assigned by a random selection method, for example by pulling the cedar from the hat.

Before going to the survey, each student should ask their parents who are working in the family, how often they go shopping, which foods they buy every day, what is in their opinion necessary to buy within

the items the student belongs to and the monthly invoices. When students meet in a group, it is necessary to share the knowledge they have come to and to make a list of the things that are necessary for the life of a family. Their imaginative family must be equipped with as many basic things as possible. The goal is to save as much as possible. It is also necessary to elect the members of the board of directors from that group. The task of the first three groups is to visit great brands and find the catalogs with the reduced prices of the products that they need in accordance with their group and then calculate how much the percentage is their discount, how much money will be saved in such a purchase and write down in their reports.

If students live in an environment where there are no large markets, these catalogs can be found in daily newspapers or discounts seen in TV commercials. Old catalogs can also be used, and the pupils can do it by going to the appropriate shops, for example the home appliance store, and writing down what is on the discount. Individual products must be found in the reports regardless of whether they are discounted because their purchase is indispensable for family life.

Thus, a group in charge of food products in their report must be obliged to include bread, dairy products, fruits and vegetables and other basic products with their prices if they are in the catalogs or not.

In the final report must be found all the products that the group "bought" with their prices with and without a discount, the total amount of money spent and how much of the percentages were saved by discounting.

As the wardrobe is rarely found in the catalogs, the group responsible for "dressing" the family has to go to the shops and on the face of the place find the reductions they mostly have throughout the year. The minimum wardrobe is a shirt, trousers or skirt, depending on the half, and shoes for each member individually.

The family, for example, consists of four members: father, mother and two children. In the final report, all the wardrobes that the group has chosen to buy with their prices with and without discounts, the total amount of money spent and how much money is saved by discounting.

As for the group in charge of monthly households, their task is for each member of the group to collect information from their parents about the monthly bills for the previous month for items: electricity, telephone, cable, internet ...

Based on the data of each group member, by calculating the mean value for each item, the monthly account of the imaginary family is obtained. Also, from talking to parents and studying accounts, the group should determine how much each account will be reduced if a payment is made to a specific date, or, if not, until the date is specified, how much will be the increase (interest) on these accounts. In the final report, all accounts should be found with their amounts if they are paid in time, to calculate how much savings have been made and what the costs would be if they were late for payment.

When all the groups complete their research, each group will say what it all included in their research, which they produce on the list, how they came to the price, what caused them problems and how much they had saved. For such a presentation, the group can choose to own a representative who does not have to be a member of the board of directors. When the presentations are over, the board of directors will meet, and based on the data that each member of the board will bring, it is calculated how much money is spent on the family (total budget), what is the final cost savings and what percentage of that total budget that group spent. This information will be forwarded to each group by each member of the board, and all submissions will be completed by entering them.

Co-operative concept mapping

The "Cooperative map concept" method has been developed by a group of authors at the Concordia University in Montreal. The author's intention was to develop a method that would help students understand the subject matter with the help of their classmates. It has been noted that a large number of children equates memory with the understanding of the material. Practice has shown that children can easily explain some of their contents and ideas to each other in their own way, rather than what teachers do. When students learn to sketch and conceptualize their explanations, the effectiveness of these instructions increases. This method requires students to plan and conceptualize their plan maps based on identifying the main ideas and links between them. It is a graphical seed, for example, a node-junction-node, in which the contents of the idea are printed in nodes (rectangles and circles) and the links are represented by lines or arrows.

It is advisable for a teacher to bring out and demonstrate a concept map and explain it and give groups so that students see a conceptual model that will later facilitate their learning and mapping.

Many students come to school with prejudices about learning and teaching, with the understanding that success is enough to memorize the facts. It also supports the beholder mode. To work efficiently in the map concept, students have to change their attitudes or prejudice about teaching. Learning objectives should be understood by students as their own.

It is necessary to form heterogeneous groups of 3 to 4 members and encourage them to cooperate and assist the weaker so they can lean onto the group. It is important for students to understand or understand what is a cooperative mapping concept and to understand the conceptualization process. The teacher should make an emphasis on thinking out loud so that all students can follow the theses, main ideas, relationships between them and the like. Let the students understand that it is not only important to conceptualize the contents, but also to develop the ability to conceptualize. It is necessary that students have the courage to notice the main ideas, to learn to summarize the text and to know what is important. When each of the students draws their own idea into the notebook, the students in the groups discuss individual notes, ideas and theses. They ask each other questions and ideas. Groups reduce the number of ideas and make the key structure of the nodes from which the concept maps will be derived. It is necessary to encourage students to ask or consult teachers, if necessary. While explaining the folder to other members of the group, the student purifies his understanding of the material.

Students should be able to see the success of this work from a teacher's point of view, but should ask themselves to analyze what they have learned and how the mapping process was going on. Also, it is important for students to emphasize that it is not only the concept of folders that they are important but also the facilitations they make when memorizing content.

CONCLUSION

The fact is that the most efficient learning is what is happening in the group and that cooperation is the basis for any progress. When we separate people and individually evaluate, we make a gap between them and their natural environment.

The results of the research have shown that co-operative learning as an indicator of quality education and education is reflected in school climate, interaction and communication, improving interpersonal relationships, willingness to help and cooperate, friendships and peer acceptance, as well as their own contribution to learning and work.

Pupils who have met cooperative learning point out the interestingness and usefulness of this learning, its contribution to relaxation and the overcoming of fears of negative evaluation and school failure. However, although the review of the mentioned literature on cooperative learning provides a clear picture that its application in school provides very potent effects when student achievement and their social and emotional development, research on school practice shows that the application of individual work is still dominant in the teaching of basic and Secondary schools. One of the possible reasons for insufficient representation of cooperative learning in practice is the fact that initial attempts by teachers to create those situations among pupils are often condemned to failure. Teachers who do not have the resources and resources to plan and apply this form of work, apart from their enthusiasm and interest in trying something new with their students, are quickly disappointed because they are faced with serious problems in discipline and motivation of students. More careful insight into interaction models in groups reveals primers of a number of phonographs and the withdrawal of others. Given that they are not accustomed to co-operation while learning, students will rather retain patterns of behavior commonly used in individual forms of work. However, this does not have to discourage the teachers. Every teacher who has had at least one successful class and felt the benefits of such a method often returns to this modern method.

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