

## INTERACTIVE METHODS OF TEACHING-LEARNING IN THE TEACHING OF THE EXERCISE COMPANY

Cotca Alina\*

Tehnicul College „Traian Vuia ” Oradea, str. C. Brancoveanu, nr. 12/a, Oradea, Romania, e-mail:[cotca\\_alina@yahoo.com](mailto:cotca_alina@yahoo.com)

### **Abstract**

*The school of the future will surely be a cybernetized school, a "living" computer lab, interdisciplinary, which will prepare early children to become problem solvers, creators again and able to make optimal decisions in the face of increasingly unusual and unusual situations of current social life and perspective. Alvin Toffler says - the fundamental objective of "supra-industrial" education - "must be to increase the adaptability of the individual, so that he can adapt quickly and easily to the permanent novelty. And the faster the pace of change, the more attention is required to discern the type of events that will occur." Interactive group methods are a way of modern stimulations of personal learning and development from an early age are teaching tools that favor the exchange of ideas, experiences, and knowledge. Interactivity involves learning through communication, through collaboration, it produces a confrontation of ideas, opinions and arguments, it creates learning situations centered on the availability and willingness of children to cooperate, on their direct and active involvement, on the mutual influence within the micro-groups and on social interaction of the members of a group.*

**Key words:** exercise company, interactive teaching methods, educational process, skills methods.

### **INTRODUCTION**

Method of teaching / learning each other's a strategy learning instructional techniques to study the text. Once they are familiar with the method, the students interpret the role of the teacher, instructing their colleagues; a development of the student-student dialogue takes place; and it can carry groups or with the whole class, the method focuses on four learning strategies used by anyone who makes a study of text on various topics. These strategies are: predicting, summarizing, asking questions, clarifying data. The resume means exposure to what is most important in terms that it is to read. Asking questions refers to the listing of a series of questions about the information read; he who asks the questions must of course know the answer. Clarification involves discussing unknown terms, more difficult to understand, appeal to various sources, and resolving misunderstandings. Predictability refers to expressing what students think will happen next, based on what they have read. The stages of the method involve explaining the purpose and describing the

method and the four strategies; group organization; team work; achievement of mutual learning; to pray, additions, comments.

## **MATERIAL AND METHOD**

Methods of interactive teaching and learning are mosaic method pyramid technique as lotus, starburst, palaloped thinking, teaching and mutual learning, exchange pair, cause and effect diagram technique 6/3/5 method FRISCO, brainstorming .

## **RESULTS AND DISCUSSION**

Mosaic method (jigsaw) - (English , jigsaw puzzle means mosaic ) or "method interdependent groups" - as he calls Neculau A. (1998) is based on team learning (team-learning). Each student has a task of study in which he must become an "expert"; it also has the responsibility of transmitting assimilated information to other colleagues. Stages and phases: 1. Preparation of the study material: The teacher establishes the study topic and divides it into 4 or 5 sub-themes. Optionally, it can establish for each sub-topic, the main elements that the student must emphasize, when studying the material independently. These can be formulated either in the form of questions, or in the affirmative, or an elliptical text that can only be completed when the student is studying the material. ( Make an expert sheet that passes the 4 or 5 sub-themes proposed and will be offered to each group ). 2. Organizing the team in learning teams of 4-5 students (depending on their number in the classroom). Each student in the team receives a number from 1 to 4-5 and has the task of studying independently, the sub-topic corresponding to its number. He must become an expert in the given problem. For example, students with the number 1 of all the learning teams formed, will deepen the sub-theme with the number 1. Those with the number 2 will study the sub-theme number 2, and so on. Independent phase: Each student studies his sub-theme, reads the corresponding text. This independent study can be done in the classroom or it can be a homework, done before the mosaic is organized. 3. Formation of expert groups: d fter which have undergone independent working phase, with the same number were combined experts, An expert group to consider the matter together. Thus, students with number 1 leave the initial learning teams and gather at a table to deepen the sub-theme with number 1. So do the other students with numbers 2, 3, 4 or 5. If the expert group has more than 6 members, it is divided into two smaller groups. Discussion phase in the expert group: The students present an individual report on what they have studied independently. Discussions take place based on the data and

materials available, new elements are added and the way in which the new knowledge will be transmitted to the other members of the initial team is also established. Each student is a member of a group of experts and is part of a learning team. From the point of view of the physical arrangement, the workgroups of the expert groups must be placed in different places of the classroom, in order not to disturb each other. The common purpose of each group of experts is to train as best they can, having the responsibility of their own learning and the teaching and learning of colleagues from the initial team.

4. Return to the initial learning team - Phase of the team report: The experts transmit the assimilated knowledge, retaining the knowledge that their colleagues, experts in other sub-topics, transmit. The mode of transmission must be short, concise, attractive, and may be accompanied by audio-visual media, various materials. Specialists in a sub-theme can demonstrate an idea, read a report, use the computer, illustrate ideas with diagrams, drawings, photographs. Members are encouraged to discuss, ask questions and make notes, each with their own ideas plan.

5. Evaluation Demonstration phase: The groups present the results of the whole class. At this point, students are ready to demonstrate what they have learned. The teacher can ask questions, ask for a report or essay or give each student an evaluation sheet to solve. If oral assessment is used, then each student will be asked a question to which they must answer without the help of the team.

The “Change the pair” method is based on the work of the students in pairs as follows: the class is divided into two equal groups as the number of participants; two concentric circles are formed, the pupils facing each other in pairs. The teacher asks a question or gives a task in pairs. Each pair discusses and then communicates ideas. The outer circle rotates clockwise, thus changing partners in pairs. Students have the opportunity to work with each member of the class. Each one is involved in the activity and contributes to solving the task.

Method stages: The stage of organizing the collective into two equal groups. Each student occupies a chair, either in the inner circle or in the outer circle. The teacher can give the students the freedom to choose their place or they can organize the group by having the children number two by two. Thus, those with the number 1 will sit in the inner circle facing the outside, and those with the number 2 in the outer circle facing the students in the inner circle. Standing face to face, each student has a partner. If the number of students is odd, the teacher may also participate in the activity or two students may work in tandem.

Presentation and explanation of the problem: The teacher offers the cases for study, the problems to be solved or the teaching situations and explains the importance of the solution.

Work in pairs: Students work two for two for a few minutes. Then the students from the outer circle move a place to the right to

change their partners, thus creating a new pair. The game is continued until the initial partners are reached or the questions are completed. The stage of analyzing ideas and drawing conclusions: At this moment, the class is grouped and the ideas emitted are analyzed. The teacher draws together with the students a diagram of the conclusions drawn. 4. *The pyramid* method or the "snowball" method is based on combining the individual activity with the cooperative one, within the groups. It consists in incorporating the activity of each member of the collective into a broader collective approach, meant to lead to the solving of a given task or problem. Phases of carrying out the pyramid method: 1. Introductory phase: the teacher sets out the data of the problem in question; 2. Phase of individual work: students work on their own to solve the problem for five minutes. At this stage, the questions related to the subject are noted. 3. Work in pairs: students form groups of two students to discuss the individual results reached by each one. Answers to individual questions from colleagues are requested and, at the same time, they are noted if new ones arise. 4. The reunion phase in larger groups. Usually, two large groups are made up, approximately equal in number of participants, composed of the smaller groups previously existing and the solutions reached are discussed. At the same time, it answers the remaining unresolved questions. The phase of reporting solutions in the collective - the whole class, gathered, analyzes and concludes on the ideas issued. They can be put on the board so that they can be viewed by all participants and compared. The answers to the unresolved questions up to this phase are also clarified, with the help of the manager (teacher); The decision-making phase - the final solution is chosen and conclusions are drawn on the steps taken and on the participation of the students / students in the activity.

The cause and effect diagram offers the possibility of highlighting the sources of a problem, event or outcome. The diagrams are used by the group as a creative process of generating and organizing the major (main) and minor (secondary) causes of an effect. Rules of organization and stages of the cause and effect diagram are as follows: divides the class into teams of laborers; to determine the issue to be discussed which is a particular event or event - the effect. Each group has an effect to analyze; the debate was held in each group to discover the causes that led to the effect discussed. The cases are registered on paper or on the board; reconstruction of the cause and effect diagram as follows: - the main axis of the diagram passes the effect; - the main causes of the effect correspond to the branches of the main axis corresponding to the 6 questions: WHEN ?, WHERE ?, WHO ?, WHY? (it happened); - as (secondary) arising from the principal is written on a smaller subset that is deducted from the major causes; Examining the list of causes generated by

each group: examining the partners; evaluating the way in which the major and minor causes were distinguished and their correct placement in the diagram, the major ones on the main branches, the minor ones on the secondary ones, relating and / or arising from them; evaluating the diagrams of each group and discussing them; establish the conclusions and the importance of the major causes. The technique of LOTUS (Flower of lily) implies the deduction of connections between ideas, concepts, starting from a central theme. The central issue or theme determines the 8 secondary ideas that are built around the main one, like the petals of the lily flower. The 8 secondary ideas are passed around the central theme, and then they become the main themes for 8 other flowers of lily. For each of these new central themes, 8 new secondary ideas will be built. Thus, starting from a central theme, new study themes are generated for which new connections and new concepts need to be developed. STAGE ART FLOWER lily targeting the construction of the diagram; writing the central theme in the center of the diagram; The participants think about ideas or applications related to the central theme. These are passed in the 8 "petals" (circles) that surround the central theme, from A to H, in the sense of clockwise; the use of the 8 ideas deduced, as new central themes for the other 8 quadrants. ("Lily flowers") ; It is the stage of building new connections for the 8 new central themes and recording them in the diagram - in this way as many quadrants are completed. ("Lily flowers") ; the idea evaluation stage - the diagrams are analyzed and the results from the qualitative and quantitative point of view are appreciated ; The issued lectures can be used as a source of new applications and study topics in future lessons. The Lotus technique can be successfully used in groups, being adaptable to broad age categories and domains. There is also the possibility of developing an individual Lotus, as an exercise in stimulating creativity and self-evaluation. For example, the central theme might be the question: "What would you like to study?", Which could be proposed 8 areas and for each one would be recorded the contents that correspond to the subject's interest.

Brainstorming , "delayed assessment" or "brain storm" is an interactive method of developing new ideas resulting from the discussions between several participants, each of which comes with a lot of suggestions. The result of these discussions results in the choice of the best solution to solve the debated situation. As a method of discussion and group creation, brainstorming (brain = brain, storming = stormy) was systematized in 1948 by professor at the University of Buffalo (USA), Alexander Osborn. The results of the experiments were published by Osborn in 1961 in the paper Appliedimagination. The method of "brainstorming" or "cascading ideas" aims to issue as many solutions, ideas, as possible on how to solve a problem, hoping that by combining them, the optimal solution will be

obtained. The way to get these ideas is to stimulate creativity within the group, in a non-critical, non-inhibiting atmosphere, a result of the postponement of the evaluation moment. In other words, the participants are released from any constraints, they communicate without fear that they will say something wrong or inappropriate, which will be appreciated as such by the other participants. The purpose of the method is to free the imagination, the unusual and original ideas, the unconventional opinions, provoking a chain reaction, constructive, to create "ideas on ideas." In this sense, an idea or suggestion, apparently unrelated. with the problem in question, it can provide premises for the emergence of other ideas from the other participants. Osborn's method is based on four fundamental rules of creative thinking: deliberate searching of ideas, postponing the judgment of ideas, large number of ideas, fertile exchange of ideas. Brainstorming takes place in a meeting of a very small group (maximum 30 people), preferably heterogeneous in terms of training and occupations, under the coordination of a moderator, who plays the role of both animator and as a mediator. The optimal duration is 20-45 minutes. Specific to this method is the fact that it comprises two moments: one of ideas production and then the moment of their evaluation (critical appraisal phase). The rules for conducting brainstorming are as follows:

- Knowledge of the issue discussed and the need to solve it, based on the clear and concise presentation from the moderator of the discussion;
- Carefully selecting the participants based on the principle of heterogeneity in terms of age, preparation, without antipathy;
- Ensuring a suitable place (no noise), spacious, bright, designed to create a stimulating atmosphere, conducive to the discussion of ideas;
- Admission and even encouraging formulating ideas as bold as unusual times, leaving participants imagination, spontaneity and creativity;
- In the first phase, the emphasis is on quantity, on the formulation of as many response variants and as diverse;
- The construction of "ideas on ideas", in the sense that, an answer can provoke associations and combinations for issuing a new cognitive-innovative approach;
- Discrete, accurate and complete recording of the discussions by a person specially designated to fulfill this role (or on the tape), without hindering the participants or the discussion;
- The evaluation is suspended and will be carried out later by the coordinator, with or without the help of the participants;
- Harnessing the ideas that come after the "incubation" period in a new session one , the next day the participants can meet again;

Starburst (starbursting) , (eng. "Star" = star; eng. "Burst" = explode), is a new method for the development of creativity, similar to brainstorming. It starts from the center of the concept and spreads out, with questions, like a stellar explosion. How to do it: Write the idea or problem on a sheet of paper and ask as many questions as possible about it. A good starting point is those of the type: What ?, Who ?, Where ?, Why ?, When ?. The list of initial questions can generate unexpected ones that may require even greater concentration to answer them. The aim of the method is to get as many questions and so many connections as strengthen concepts. It is a way of stimulating individual and group creativity. Organized in a group, the stellar explosion facilitates the participation of the whole group, stimulates the creation of questions to questions, as the brainstorming develops the construction of ideas on ideas. The steps of the method aims proposals a problem; organizing the collective into preferential groups; work in the team by elaborating a list with more and more diverse questions ; bad results of group work; it is the settlement of the most interesting questions and the appreciation of the work in cooperation. Optionally, it is possible to proceed to the elaboration of answers to some of the questions. The stellar explosion method is easy to apply to any age and to a wide range of domains. It is not expensive and does not require detailed explanations. The participants get caught up quickly in the game, on the one hand it is a way to relax and, on the other hand, a source of new discoveries.

The method Hat thinking ( "Thinkinghats" - Edward de Bono) is t is an interactive technique for stimulating creativity participants based on the role-playing based on the selected hat. There are 6 thinking hats, each with a color: white, red, yellow, green, blue and black. The members of the group choose their hats and will thus interpret the precise role, as they see fit. The roles can be reversed, the participants are free to say what they think, but to agree with the role they play. The color of the hat is what defines the role. Thus , the White Hat: • Offers an objective look at the information; • It is neutral; • It is focused on objective facts and clear images; • It is under the sign of objective thinking; Red hat: • It frees the imagination and feelings; • Provides an emotional perspective on events; • Red can also mean anger or anger; • It unlocks the affective states;

The black hat: • Expresses caution, care, warning, judgment; • Give her r spectators dark, sad, bleak the situation in question; • It is the perspective of negative, pessimistic thinking; Yellow hat: • Provides the r spectators positive and constructive on the situation • Yellow symbolizes sunshine, brightness, optimism; • It is optimistic, constructive thinking on a logical basis; The green hat: • Expresses new ideas, stimulating creative thinking; • It is the fresh green of the grass, of the vegetation, of the abundance; • It is the symbol of fertility, of the production

of new, innovative ideas; Blue hat: • Expresses control of the thought process; • Blue is cold; it is the color of heaven that is above all, all-seeing and all-knowing; • Supervises and supervises the smooth running of the activity; • It is the concern to control and organize; Participants need to know very well the meaning of each color and to represent each hat, thinking from its perspective. Not the hat itself matters, but what it means, what induces the color of each one. The 6 thinking hats can be viewed in pairs: White hat - red hat ; Black hat - yellow hat ; The green hat - the blue hat . How is this method used? The 6 thinking hats are divided to the students and the case is presented for discussion so that each one can prepare their ideas. The hat can be worn individually - and then the student plays the role - or more students can respond under the same hat. In this case, the students of the group interpreting the role of a thinking hat cooperate in ensuring the best interpretation. They can wear each hat of the same color. Being aware that: The blue hat clarifies white hat informs green hat generates new ideas .

The 6/3/5 technique is similar to brainstorming. New ideas, however, are written on paper sheets circulating among participants, which is why it is also called the brainwriting method. The technique is called 6/3/5 because there are: - 6 members in the working group, who write down on a sheet of paper how many - 3 solutions each, for a given problem, for - 5 minutes. The steps of method 6/3/5: 1. Divide the class into groups of 6 members each. 2. Formulate the problem and explain the working method. Students each receive a sheet of paper divided into three columns. 3. Conduct group activity. The pins of the standing stage consists of a combination of individual collective activity. For this problem, each of the 6 participants, has to write down on a sheet, 3 solutions in the table with 3 columns, in a maximum time of 5 minutes. The sheets then migrate from left to right until they reach the original owner. The one who received the colleague's sheet from the left, reads the solutions already noted and tries to modify them in a creative way, by new formulations, adapting them, improving them and reconstructing them continuously. 4. Analyze the solutions and retain the best ones. Centralize the obtained data, discuss and evaluate the results.

11. Philips 6/6 was developed by literature professor J. Donald Philips (where his name comes from) who tested it at the University of Michigan. It is similar to brainstorming and the 6/3/5 method, but it is individualized by limiting the discussion of the 6 participants to 6 minutes. This fact aims to intensify creative production, as in the case of method 6/3/5. The stages of the Philips 6/6 method: 1. Establishment of groups of 6 participants (4 members + 1 secretary + 1 group leader ). The secretary of each group also has the task of writing down the ideas of the



colleagues. The leader is the one who leads the debate within the group and presents the conclusions. 2. Handing over the topic / issue to be discussed in particular, by each group and motivating its importance. 3. Conduct discussions based on the theme, within the group, for 6 minutes. These can be free, in the sense that each member proposes an answer and in the end the most important ideas are retained or they can be progressive discussions in which each participant exposes within his group a variant that is analyzed and then moves on to the other ideas. 4. Collecting the solutions developed - The leaders of each group set out the ideas to which they arrived or they are handed over in writing to the coordinator of the group (the teacher). 5. The collective discussion, the collective decision regarding the final solution, based on the hierarchy of variants

12. The Frisco method is based on the interpretation by the participants of a specific role, covering a certain dimension of personality, approaching a problem from several perspectives. Thus, the group will have to play each turn, the role exuberance role of pessimist and optimist role. The method was proposed by the Four Boys of Frisco research team (the four boys in San Francisco), and its purpose is to identify complex and difficult problems and solve them in simple and efficient ways. It is based on directed brainstorming and asks the pupils / students empathic abilities, critically least then emphasis on stimulating thinking, imagination and creativity. The stages of the Frisco method: it involves solving the problem - the teacher or the students notify a situation-problem and propose it for analysis; the organization of the collective - the roles are established: the conservative, the exuberant, the pessimistic, the optimistic and who will interpret them. Roles can be approached individually or, in the case of large groups, the same role can be played by several participants simultaneously, forming a team. Stage of collective debate: each interprets the chosen role and supports his point of view in accordance with it. The one who is conservative has the role of appreciating the merits of the old solutions, deciding for their maintenance, without excluding the possibility of possible improvements. The exuberant looks to the future and issues ideas seemingly impossible to apply in practice, thus ensuring an imaginative-creative, innovative framework and stimulating the other participants to look at things in this way. It is based on a contagion phenomenon. It is the pessimist who does not have a good opinion about what is being discussed, censoring the initial ideas and solutions proposed. It highlights the aspects of any improvements. Optimist illuminates the shadow left by the pessimist, encouraging participants to look at things from a real, concrete and achievable perspective. He finds realistic foundations and the possibilities of realizing the solutions proposed by the exuberant., Stimulating the participants to think positively. The stage of systematizing

the ideas issued and the conclusion on the solutions found. At this stage, the elaboration of the main ideas and the formulation of the conclusions regarding the solution of the initial problem were set. It is like "Thinking Hats" both in terms of deployment and in terms of benefits and lim and communication.

## CONCLUSION

In conclusion, these methods are welcomed in the educational activity, because it helps us a lot - both teachers and students - to see with real eyes the real life and, implicitly, the role of the school in the training and professional training at high parameters of the young woman generations. Through the exercise company, students have a different perspective on the business environment and more confidence in their own capabilities and opportunities that the future offers. They know better the realities of the labor market and they will know what is the way to choose a successful profession or business.

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