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Shirina Irgashevna Zakirova
Tashkent State Technical University named after Islam Karimov
teacher

ACTIVE TEACHING METHODS AIMED AT DEVELOPING STUDENTS' INDEPENDENT AND CREATIVE THINKING

Abstract: *At present, almost all developed countries of the world have realized the need to reform their education systems so that the student really becomes the central figure of the educational process, so that the student's cognitive activity is the focus of attention of teachers, researchers, developers of educational programs, training tools for administrative workers, i.e., the process of learning, and not teaching, as it was still with traditional training.*

Key words: *pedagogical activity, creative thinking, independent, teaching methods.*
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Introduction

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Being able to learn and study intensively according to our conclusions is especially important today, when the concept of education is changing: from lifelong learning to lifelong learning. Therefore, the task of educational institutions today is not so much to transmit information, but to teach a person to learn independently and constantly, to solve life and professional problems, to have a sustainable viability. What conditions are necessary for this? First of all, the opportunity to engage each student in active learning process, not a process of passive learning and active cognitive activity of each student, application of them in practice these knowledge by means of teaching methods. We have conducted pedagogical experiments on the use of active teaching methods, which we will discuss below. The associogram method is a complex teaching method that facilitates the integration of knowledge into cognitive structures, guided by educational and psychological foundations. The didactic goal is to promote a holistic range of vision of the circumstances of the case, to activate knowledge, to deepen and improve memory. The methodological goal is to independently apply the reserves of complex knowledge and assist in the development of the ability to perceive the educational situation and evaluate it correctly. Method associogram is used for graphical representation and structuring of knowledge. This method refers to the educational and psychological basis of cognition, that learning always requires the integration of new concepts and concepts into existing cognitive structures. When using this method, based on the topic as the center, further details and ideas are presented in the form of branches.

The concept, as well as the method of associograms, was proposed in the 70s by the Englishman Tony Buzan. The starting point of his reasoning was that students work primarily with the" logical thinking " left hemisphere of the brain. Therefore, with his method of associograms, he developed a method of working and graphical representation that equally stimulates both the right and left hemispheres of the brain, because this method connects imaginative and creative thinking and logical and analytical thinking. In the German-language space, the concept of "Mind Mapping" has been strengthened, since the English word "mind" has many versatile translation options, for example, memory, reminder, Association, motivation, etc. The associogram method is always suitable as a method when it comes to hierarchical and visual structuring of knowledge, as well as visualization of complex

relationships. Therefore, it is particularly well suited for:

• developing generalizations
• presenting complex systems
• systematizing texts and concepts
• reviewing notes/notes or training material
• planning projects
• consolidating and deepening training material to collect and structure ideas. Method associogram is a technique you need to learn; it is for demanding applications, such as writing abstracts, that you need to train first on simple examples. The training sessions present a wide variety of possibilities for using this method. Whether it's individual work, group work, or developing a topic as a whole class, you can use the associogram method. The study using the method of associogram. As auxiliary tools, you need: white non-laminated paper of at least A4 size, a pencil, an eraser, and colored pencils. Some points that need to be taken into account in the classroom: - give students time to tune in to the topic; - limit the time spent on drawing a picture; - give students the opportunity to view the pictures of others; - allow students to present their associograms (Mind Map), as a result of this, the further meaning of the concepts is explained and new associations are opened; - if there are ambiguities, leave "holes" that should be discussed together later; - pay attention to the legibility of the handwriting the associogram can look like this:

• Analysis by using keywords, you can focus on the most important things, while saving time (for development and reading) and space on paper.

• Thanks to visibility, information is processed faster and stored in memory for longer.

• The associogram detects gaps: based on the graphical representation, it becomes quite obvious which ideas/thoughts are already well developed and which are still less developed.

• Method of associogram perfect for repetition of the material; the basic knowledge is already available, and there are enough associated keywords to reconstruct and recall.

• Stimulation of communication processes in the distribution of work groups. No assologaima not perfect. Drafting associogram need to learn and it requires some training.

• The following difficulties may arise often encounter resistance from participants (the principle of operation does not correspond to their usual processes of thinking) the Risk of lack of clarity (with numerous cross-references or too much information);

• The selected key concepts/symbols are individual and may not be clear to others multiple entries/ rewrites of the same associogram take a lot of time. Another of the new active methods is lateral thinking, which we have effectively used in the educational process. Lateral thinking.

The use of complex teaching methods contributes to the development of creative approaches to "lateral thinking". It means "lateral thinking", "non-standard thinking", in the sense of changing the point of view and as a creative method of finding ideas is a necessary complement to the prevailing vertical thinking. The didactic goal of lateral thinking is to improve problem-solving competence. The methodological goal of lateral thinking is to create new alternative, creative, unusual ideas or solutions in a way that differs from the traditional, familiar way of data processing (vertical thinking). Basics the theory of creative thinking and action can be characterized by the following features:

- perception and processing of information is usually carried out by preferred / familiar ways of processing data and information;

- lateral (creative) thinking "lateral thinking": moving away from the usual ways of processing data and information, finding non - standard solutions;

- contrasting vertical and lateral. The concept, method, and theory was expressed in the mid-1960s by Dr. Edward de Bono based on a study of creative approaches to problem solving. The starting point of his theory was the knowledge of the straightness of the structures of human thought. Edward de Bono has developed a large number of methods that should help you find new ideas and abandon the usual ways of thinking. These include, for example, lateral thinking and the hat method.

Lateral thinking methods are primarily useful for finding ideas, for example, for finding new ideas for a product or for opportunities to improve a product. Structure and implementation of the "lateral thinking" method. The conditions for successful conduct include:

- a creative team of participants;

- a trained discussion leader. It can be carried out in accordance with the following stages:

- identification of problems or shortcomings - formation of a group for the workshop-selection of a suitable moderator - selection of methods - conducting in compliance with the rules - collection of ideas - processing of ideas, further improvement of promising ideas in the proposal for a solution-evaluation of the solution proposals - planning the first step of implementation. Various methods are recommended to avoid the prevailing methods of consideration. At the same time, it purposefully returns to the use of heuristic methods of cognition. These methods include:

• inverting the point of view
• visual thinking
• breaking down the problem into smaller and smaller units, then trying to put them together in a new way;
• switching attention from surface aspects to less important ones
• recognizing dominant ideas and thought patterns
• finding other ways to consider things

• loosening the strict control that is exercised by rational-logical thinking

• consciously applying randomness

• deliberately turning relationships

• analogies, transferring the relationships of a situation to another situation that is easier to use. We present methods related to lateral thinking.

Method of random impact:

- search for a word, a random concept that is in no way related to the topic,

- contrast "word-problem" (a combination of words),

- create an Association between them. There are many other methods of lateral thinking, for example: - "the creative pause" (short stoppage/pause to consciously create distance/look) - "mental provocation" (deliberate breaking of the bounds of sense by means of "provocative operations"), in which illogical and erroneous manifestation of logical thinking must go on: change of perspectives, deliberate understatement, distorted/caricature paintings, wishful thinking).

Analysis the strengths of lateral thinking, the method of creative approach to problem solving include: gives new original impulses for thinking at a standstill in the creation of ideas - frequent change of perspectives contributes to the emergence of a large number of non-standard ideas/solutions proposals, increases the motivation of participants due to game elements - the basis (the theory of creative approach to problem solving) is a recognized theory - requires qualified moderation, otherwise "vague application". Comparison with the method of brainstorming and the method of cross-marking ideas. The brainstorming method collects or generates ideas for a specific problem area within a group for a certain limited time. The method of cross-referencing ideas is very similar to the method of brainstorming, in which participants' ideas are recorded (see the section" Brainstorming" and "Cross-referencing ideas"). Brainstorming or cross-mapping ideas can be used as a formal condition for all the methods of lateral thinking described earlier. For example, misrepresentations, conversions, and exaggerations may be used. However, it should be noted that lateral thinking should not be identified with brainstorming. Brainstorming cross-reference ideas are only formal frameworks/conditions that offer unambiguous structures that facilitate the thinking process.

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