

## PRACTICAL WAYS TO LEARN AND USE THE EDUCATIONAL CLUSTER

*B.A. Akhmedov*

*Senior Teacher of Chirchik State Pedagogical Institute*

*Republic of Uzbekistan*

*J.M. Majidov*

*Senior Teacher of Jizzakh State Pedagogical Institute*

*Republic of Uzbekistan*

***Annotation:** This article discusses the possibilities of the cluster method, the essence of its use in the classroom of information technology and methods of their practical application, contributing to the development of creative thinking, increasing the scientific and pedagogical aspects of the effectiveness of teaching the subject.*

***Key words:** cluster, method, technology, thinking, students, computer, informatics, students, student, group, problem, knowledge, activity.*

Today in a number of developed countries it is possible to use modern pedagogical technologies that guarantee the effectiveness of the educational process. The cluster, which is widely used in educational institutions, is used to solve problems in the implementation of the educational process as a whole, for the rational organization of the educational process, for increasing the interest of students on the part of the teacher, for dividing the educational material into optimal proportions. An activity or problem in the independent implementation of practical exercises for the application of such techniques as brainstorming, work in small groups, discussion, problem situation, project, role-playing games - shows its effectiveness in solving problems in a joint way of thinking in debates. The advantage of this method is that it teaches the student to think independently and prepares him for an independent life. When choosing cluster teaching methods, the purpose of teaching, the number and capabilities of students, the educational and

material conditions of the educational institution, the duration of training, the pedagogical skills of the teacher, and others are taken into account.

The Cluster Method is a method that activates learners and encourages independent thinking, and encourages the active participation of teachers and learners who are at the center of the learning process. The student is actively involved in the learning process. In this process, students develop a high level of learning, initiative and responsibility in adapting the knowledge gained to their goals and needs, the ability to think about the implementation of auxiliary practice.

The use of cluster methods in the educational process has its own characteristics. The cluster method used in educational practice expands the thinking of students and has a positive effect on finding the right solution to the problem. Through the cluster method, students' knowledge, skills, abilities, creativity and activity develop their views on theoretical and practical problems.

When implementing the technology of the "cluster" method, the student writes on paper what he thinks. He does not write about the quality of his thoughts, he just writes them down. He is oblivious to spelling or other aspects of the writing. The recording will not stop until the allotted time has elapsed. If the student is unable to come up with an idea within a certain period of time, he begins to draw something on a piece of paper. This movement will continue until a new idea is born. He seeks to promote as many new ideas as possible within a specific concept and to show the relationship and interdependence between them. The quality of collecting ideas and demonstrating connections between them is unlimited.

The "cluster" method is a well thought out strategy that is implemented in individual or group lessons with students.

Cluster is an English word for (cluster) - is an uneven form of free and open thinking on a specific topic in an entire situation.

When implementing the cluster method, the main concept of the new topic is written in the form of a pie chart. For example, if a new topic is teaching skills, students are asked to write down their thoughts on the subject. In this case, ideas

written by students are generalized. These ideas can be written on a blackboard with chalk or on a poster with felt-tip pens, or in a text editor on a computer.

At the stage of consolidating the lesson in the study of a new topic, the students are given the following task. The use of red pens (green, albeit black) is enriched with new learned concepts.

Students recite (read) what is written. On a blackboard (with a different color of chalk) or on a poster, write down the ideas expressed by other colored artists.

The cluster method, as a special form of pedagogical, didactic strategy, allows students to think voluntarily, freely, openly and freely express their views on problems (topics).

This method is used in thinking, in determining the connections between different ideas. These processes serve to ensure the harmony of mental activity until students master it deeply and completely. In the classroom, this method is manifested in the form of a set of ideas expressed by students. Because in this process, you can reconcile the ideas put forward by each student and find connections between them.

The teacher should summarize his ideas and add something to the cluster using additional literature.

**The cluster method is a key factor in free thinking.**

The “cluster” method is a pedagogical strategy that helps students think freely and openly on a topic. This method develops multi-disciplinary thinking skills to establish connections between the studied concepts (events, incidents).

The word cluster means link. Clustering can be used to stimulate thinking in the stages of encouragement, awareness and reflection. Basically, it is a strategy for awakening new ideas, reaching existing knowledge and encouraging new thinking on a specific topic. It is advisable to use clusters by topic before exploring the topic completely.

The cluster method is a form of thinking that is not focused on a specific object. Its use occurs in connection with the principle of the human brain. This

method serves to ensure that thought activity is in rhythm until the learner assimilates a particular topic deeply and completely.

This teaching method is a well thought out strategy that can be used with the student individually or in groups.

In the classroom, this method manifests itself as a set of ideas expressed by group members. This allows you to harmonize the ideas put forward by each member of the group, and find connections between them.

The teacher should promote as many new ideas as possible within a specific concept and show the relationship and connection between these ideas. Not limited to demonstrating the quality of the collection of ideas and the connections between them.

This method can be used for training as follows:

Topic: "Research of the structure of a computer."

Course objectives: to strengthen students' ability to relate to a new topic, develop skills and competencies.

Organization of the lesson: to improve the effectiveness of learning a new topic, a small exercise will be conducted on repeating the previous topics. It can be organized as follows:

- What do you know about computers?
- What is the name of the world famous computer?
- What are the names of the companies that develop them?
- What is an example of the golden rules of the computer?
- How to use it?

By repeating the previous topic, the ground is being prepared for future undergraduate teachers to master the new topic. This ensures the efficiency of mastering a new topic. In group activities, this method manifests itself as a set of ideas expressed by group members. Each group member comes up with an idea, after which all ideas are combined. For this, the teacher divides the applicant into 3 or 4 groups. Tells students a specific topic. Here is an example of the path that will be taken until they master the subject.

Future computer science teachers have the opportunity to think freely and openly on the following issues:

- What are the main objects of informatics?
- What does it depend on?
- A poster highlighting these issues will be posted on the board.

Course Outline: Review questions are asked in advance. Undergraduate teachers reiterate this topic through this. The educator uses the method described above to express ideas expressed. After completing these steps, the group members agree on their ideas, find connections between them, and submit them to the group members for consideration. For this, a representative is elected from each group.

A number of ideas gathered by the group will be read aloud. After going through these steps, presented by the cluster method, prospective undergraduate computer science teachers will automatically understand the new topic.

## **CONCLUSION**

The use of innovative methods to improve the effectiveness of the course depends primarily on the special professional potential of teachers to improve their qualifications. The use of innovative methods, taking into account the teaching hours of subjects, is necessary to solve the problem of improving one's knowledge in different ways. However, the skill of the cluster method includes such universal components that these components can be used by teachers of different disciplines and in this direction they can quickly achieve good results. Potential is a specific trait that is required to effectively perform a specific job in a specific field of science. The concept of potential includes specialized knowledge, certain skills, ways of thinking and an understanding of responsibility for one's actions. It is also important that teachers are happy with their work.

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