

**EMERGENCIES AND CIVIL PROTECTION  
INNOVATIVE TECHNOLOGIES OF SCIENCE TEACHING****Bakhrom Arolovich Ochilov****Teacher of the Tashkent Pediatric Medical Institute****ochilovb5775@gmail.com****Zakirjan Radjabbaevich Khudayberganov****Teacher of the Tashkent Pediatric Medical Institute****xudayberganovzakirjan63@gmail.com****Annotation**

This article describes new approaches and effective methods of teaching interactivity on the subject of "Natural emergencies and population protection" taught in the subject of "Emergency situations and civil protection".

**Key words:** method, technology, venn diagram, cluster, sinkwine, cubic strategy, interactive method.

**Аннотация:** В статье описываются новые подходы и эффективные методы обучения интерактивности по предмету «Чрезвычайные ситуации природного характера и защита населения», преподаваемому в рамках предмета «Чрезвычайные ситуации и гражданская защита».

**Ключевые слова:** метод, технология, диаграмма Венна, кластер, синквейн, кубическая стратегия, интерактивный метод.

As is known, "emergency situations" are situations that pose a great danger, whether due to natural forces, other threats to health or illness, or an accident or other deliberate act that can cause serious harm to people or damage to property. In our time, the occurrence of such unpleasant situations depends on various factors, and the protection of citizens from these situations requires them to have knowledge about them. Therefore, the use and widespread introduction of interactive methods in educational institutions to master advanced pedagogical technologies is of great importance. The goal of introducing new pedagogical technologies into the education system of our country is to create new forms and methods of educating a harmonious generation and improve the quality of education. These new pedagogical technologies are manifested in a new technological approach to education, interactive methods of teaching, person-oriented education,

distance learning acmeology, and other forms. Interactive teaching methods provide an effective impact on the quality of the pedagogical process. They are methods that activate the learning process, ensure the creative participation of students in this process. This allows students to develop not only professional knowledge, but also practical skills and qualifications, based on creative thinking and attentiveness to continuous learning. The widespread use of interactive teaching methods such as “Brain Attack”, information collection and dissemination, syncwine, clustering, text “insert” and “zig-zag” serves to develop students' independent thinking abilities. Technological approaches to teaching can be applied to almost all disciplines, including Emergency Situations and Civil Protection. For example, the objectives on the topic "Natural emergency situations and population protection from them" are clarified, using the text of lectures on the topic, using the interactive methods "Venn diagram", "Cubic strategy", "Cluster" and "Sinkway" on the example of the expression "Natural disaster" will help the lesson to form meaningful and practical knowledge.

1. Using a “**Venn diagram**” two concepts are identified that share common characteristics or features. Below is a Venn diagram for the concepts “Natural Disaster” and “Tragic Events”:

Key concepts of the new topic	Common aspects	To the previous topic comparison
Natural disaster: 1. Types - earthquakes, floods, droughts and landslides. 2. Causes - heavy rainfall, powerful tectonic forces and large energy occurring in the depths of the earth, mining in mountainous areas. 3. Elimination methods - student fills in	1. It happens on a very large scale and suddenly. 2. Normal living and working conditions of people are disrupted. 3. People are killed. 4. Material wealth is lost. 5. The student finds common ground.	Tragic event: 1. Types - chemical damage, radioactive damage, transport accidents and fires. 2. Causes - road conditions, improper use of machines and mechanisms, failure to comply with safety equipment and traffic rules. 3. Elimination methods - this is filled in by the student.

Completing the Venn diagram can be a basis for the teacher to assess how much information the student has about the new topic and the level of mastery of the topic covered. Because only the concepts related to the car are given from the tragedies, and the student is forced to think about the rest in order to fill in the blanks while reading the completed part.

**1. Apply the cube strategy.**

A) "**Define**". Natural disasters are sudden, extraordinary events that occur in nature, as a result of which the normal living and working conditions of people are disrupted, leading to the death of people, the loss of agricultural animals and material wealth. Natural disasters include earthquakes, floods, landslides, strong winds, droughts, etc.

B) "**Compare**". As it is known, from emergency situations of natural color besides, there are man-made and environmental emergency situations. Natural emergency situations occur under the influence of natural processes without the participation of people, while man-made and ecological emergency situations occur directly under the influence of processes (tragedies and fires) caused by human production processes and transport, chemically hazardous objects and other activities.

C) "**Association**". Natural disasters are usually sudden, unexpected events that are inevitable sooner or later. Therefore, they require advance preparation.

D) "**Analysis**". The occurrence or occurrence of natural disasters differs from one another with its own characteristics. Therefore, the ways to protect people from such disasters also vary.

It is important to have knowledge about natural disasters and develop measures to protect against them.

E) "**Support**". When an earthquake occurs, a person should be mentally prepared so that he does not lose himself or panic, regardless of where he is. To do this, each of his movements should be planned in advance. For example, a person caught in a flood should swim along the water current to a low-lying shore without losing himself; people living in areas prone to landslides should know in advance whether their homes are at risk of being swept away by a landslide. Usually, it is not possible to live in areas prone to landslides or build buildings for other purposes.

F) "**Substantial evidence**". Earthquakes occur on our planet almost every day to varying degrees. According to data, on average, more than a thousand earthquakes occur on our planet every year. More than 10 of them are extremely dangerous. The factors that cause floods and mudflows are heavy rainfall - hail, sudden (sudden) melting of snow, strong winds, ice accumulation on rivers and formation of artificial dams, erosion, sliding of mountain rocks or other causes of destruction of reservoirs. The slope of the impermeable rock mass lying under the loess

- soils located on the slopes plays an important role in the occurrence of landslides. The slope of the impermeable rock mass corresponding to the relief, the higher the probability of landslides of the mass lying on it.

The duration of a mudflow can range from 0.5-2 hours to 12 hours, and the speed can reach 5-8 m/s to 12 m/s. Such a large volume and high speed mudflow destroys all public facilities, residential buildings, hydraulic structures in its path, and destroys agricultural crops. It kills people and animals. Indeed, preventing natural disasters and acting correctly when they occur is the key to people's safe lives.

## **2. Application of the cluster-interactive method.**

To use this method of thematic phraseology, students are given an exercise with the word "Natural Disaster" using the "Brainstorm" or "Insert" methods and each thought or information they express is collected. The phrase "Natural Disaster" is placed in the center of a circle, and any thoughts expressed by the students are written around the circle.

In this case, such words can be as follows: suddenly happens..., Earthquake..., Migration..., People die..., Drought..., Strong wind..., Material wealth is lost..., Fire..., Heavy rainfall..., ..., Flood..., Evacuation of the population to safe places..., First aid for the injured..., etc.

Then all the expressed thoughts are grouped.

**4. Sinkwine** – The interactive method helps to develop students' thinking skills based on a different approach to the problem in the process of disseminating and summarizing information.

1. \_\_\_ noun (who, what);
2. \_\_\_ \_\_\_ adjective (what, how);
3. \_\_\_ \_\_\_ \_\_\_ verb (task, function);
4. \_\_\_ \_\_\_ \_\_\_ association (imagination, what came to mind)
5. \_\_\_ noun synonym (similarity).

For example: "We will make a syncwine for the phrase Natural disaster:

1. "Natural disaster"
2. Terrible, terrible;
3. Causing harm to people and nature;
4. Nature, people, plants, mountains;
5. Disaster.

During the lesson, it is also necessary to take into account the boredom of students. One of the main reasons for this is the uniformity of the teaching method. Therefore, when organizing the lesson process, it is necessary to choose various teaching methods, as mentioned above.

In conclusion, it can be said that choosing methods of new pedagogical technologies that encourage independent thinking as much as possible, based on ensuring the activity of students in the learning process and increasing their readiness for practice, will give good results. Even for the purpose of repeating the previous lesson and consolidating a new topic, the correct selection of these interactive methods requires sufficient knowledge and skill from the teacher.

## REFERENCES

1. Гусейнзаде Р.Лятиф оглы Современные образовательные технологии: Уч.пособ. – М., Народное образование, 1998. -198 с.
2. Tuxtamirzaevich M. A., Axmadjanovich T. A. Suv toshqini sodir bo'lganda aholining harakati //Principal issues of scientific research and modern education. – 2023. – Т. 2. – №. 1.  
[https://en.wikipedia.org/wiki/Civil\\_defense](https://en.wikipedia.org/wiki/Civil_defense)
3. Ochilova Guzal Aralovna. Structure and functions of society are one of the key aspects of sociology. <https://grnjournal.us/index.php/STEM/article/view/4406>.  
*www. grnjournal.us*
4. Очилова Г.А. Professional competence and modern technologies.  
Volume: 3 Issue:4 | April–2024 ISSN: 2720-6874  
<https://journals.academiczone.net/index.php/ijfe/article/view/2638>
5. Ochilova Go'zal Aralovna. Increasing Youth Engagement in a Global Warming Environment. //  
Volume 02, Issue 11, 2024 ISSN (E): 2994-9521.  
<https://multijournals.org/index.php/excellencia-imje/article/view/2650/2927>.
6. Ochilova Go'zal Aralovna. The role of the youth generation in increasing the social activity of young people  
<https://www.ijmrd.in/index.php/imjrd/article/view/2084>
7. Ochilova G.A.Davlatchilik taraqqiyotida shaxsning siyosiy ijtimoiylashuvi. Ijtimoiy fanlar jurnali 2024.№4