

**TEXT OF SCIENTIFIC WORK ON THE TOPIC USE OF NEW  
INTERACTIVE TECHNOLOGIES IN TEACHING BOTANY TO  
STUDENTS OF ACADEMIC LYCEUMS**

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**ABSTRACT**

*The article discusses the features of teaching botany with the help of interactive forms and teaching methods, as the most relevant at the present stage of teaching. Some forms are considered and teaching methods are given for their practical implementation in the educational process. The article contains an excerpt from a lesson using this method.*

**KEYWORDS:** *Botany; Education; Interaction; Innovative Technologies.*

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**INTRODUCTION**

Interactivity (in the context of an information system) is the ability of an information and communication system to respond differently to any user actions in the active mode. Interactive is an indispensable condition for the functioning of a highly effective learning model, the main goal of which is the active involvement of each of the students in the educational and research processes.

The most common interactive methods include:

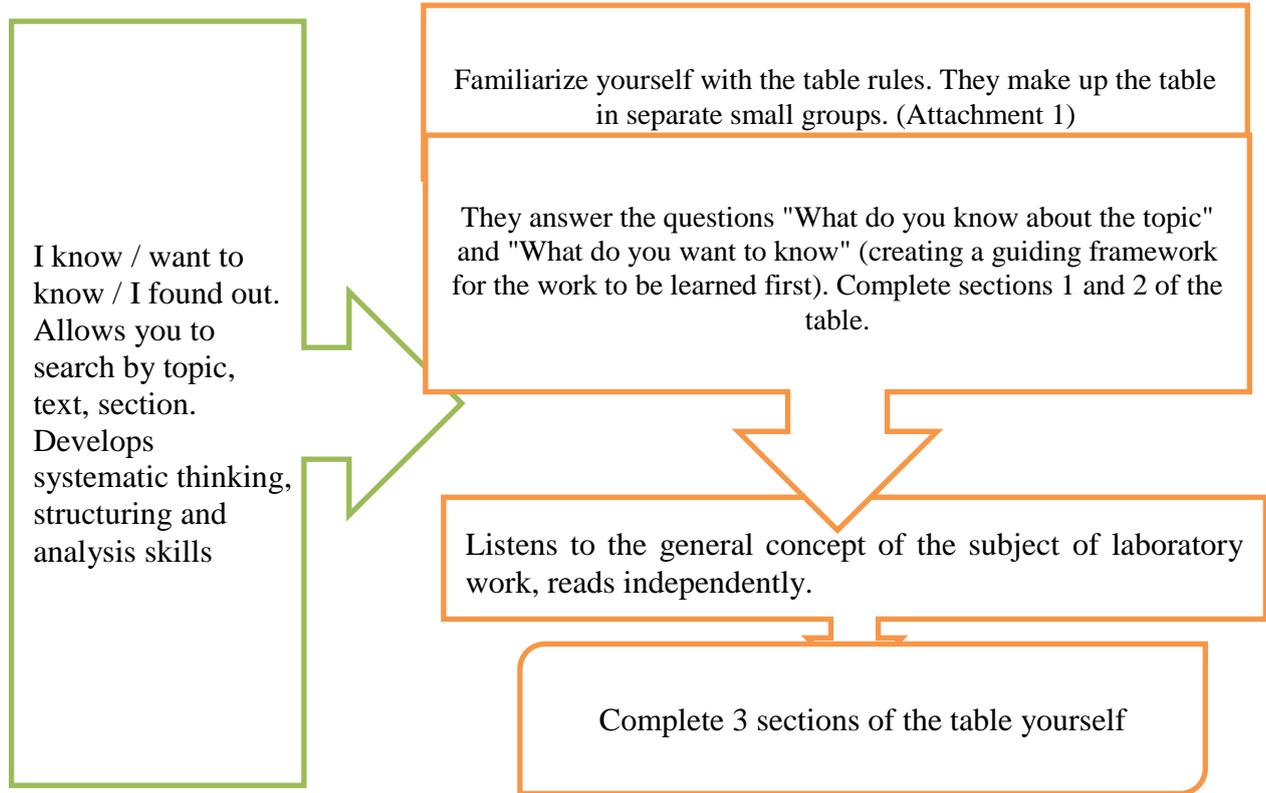
- Brainstorming
- Round tables (discussion, debate)
- Case-study (case study, situational analysis)
- Business and role- playing games
- Master classes

However, there are other popular methods, such as Socratic dialogues, group discussions, trainings, interactive conferences and much more. All these methods are united by high efficiency and a number of advantages.

**Advantages of Interactive Teaching Methods:**

- Learning becomes individual, taking into account the personality, interests and needs of each student;
- It becomes possible to concisely and concisely present any amount of educational information;
- Visual perception improves several times, the process of assimilation of educational material is greatly simplified;
- The cognitive activity of students is activated; they receive theoretical knowledge and practical skills.

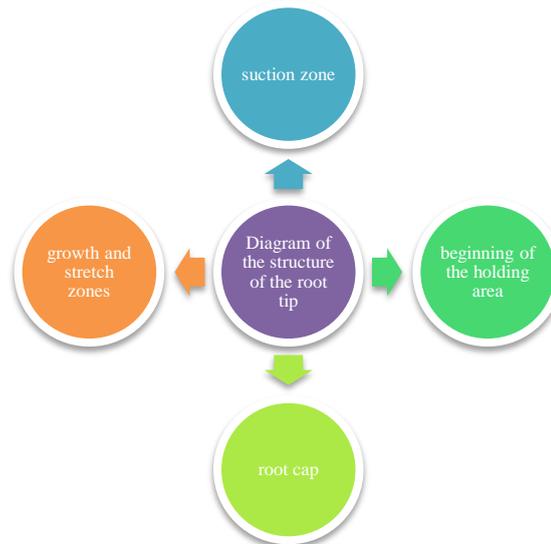
Let's take a look at some of the interactive methods currently used in Botany classes.



**KWFtable**

I know	I want to know	I found out

**Cluster-** this is a graphic form of organizing information, when the main semantic units are distinguished, which are fixed in the form of a diagram with the designation of all the links between them. It is an image that contributes to the systematization and generalization of educational material.



### FSMU-TECHNOLOGY

**(F)**- Express your opinion.

**(S)**- Give a reason for your statement.

**(M)**-Give an example (proof) to prove your reason.

**(U)**- Summarize your opinion. This technology can be used to resolve disputes, debates, or at the end of a workshop (to find out what students think about the workshop) or after studying a section based on the syllabus, as this technology allows students to defend their opinions. free thinking and the ability to communicate one's thoughts to others, to argue openly, as well as the students, teaches students to analyze the knowledge they have acquired in the learning process, to assess how well they have mastered it, and to engage the audience in a culture of debate.

### Purpose

This technology makes their ideas clear and concise on plain paper distributed to listenersexpressing, helps to state affirmative arguments or contradictory opinions.

**Conversion technology. This technology is implemented in several stages:**

#### Step1.

-The trainee identifies together with the audience the topic of discussion or the problem to be discussed, or the section studied;

-The trainee informs the students that first each student will work individually, then in small groups, and finally at the end of the lesson as a team:

- During the lesson, it is mentioned that each listener can freely express his / her opinion.

#### Step2.

Each listener will be given a paper with 4 steps of FSMU technology: F – state your opinion. S - give a reason for expressing your opinion. M - give an example (proof)toprove your reason. U - summarize your point of view. Each listener completes the 4th stage of the FSMU in an individually distributed case with a written statement of their views.

#### Step3.

After each listener fills out their papers, the trainee asks them to divide them into small groups or divides the listeners into small groups using different grouping methods: -The trainer distributes large format papers with 4 steps of FSMU technology to each group: -Each listener in small groups suggests that they write in 4 steps, summarizing the ideas and arguments in large format from the papers they have written.

**Step4.**

In small groups, first each listener introduces the group members to the ideas of each stage he / she has written. After all the opinions of the group members have been studied, the members of the subgroup begin to summarize them: summarizing, prepare to defend it. During the generalization of opinions, each listener can defend and prove his point.

**Step5.**

They protect their generalized ideas in small groups: The group representative reads each stage separately without commenting as much as possible. They can explain exactly why the group came up with the idea and prove some sections.

**CONCLUSIONS**

Teaching the discipline "Botany" in the system of secondary education, one has to face a number of difficulties, one of which is the "compression" of study time for the presentation of new material, on the other hand, the requirements for an in-depth level of assimilation of material by non-biological specialists are growing. All this requires the teacher to make the most efficient use of teaching time. Not the last place in innovative methods is occupied by cases and test systems in all sections of the discipline, work with which can be carried out by the student either independently or under the supervision of a teacher, which significantly consolidates the knowledge gained in the course of a practical (laboratory) lesson or in preparation for it.

2. The combined use of modern pedagogical technologies causes a creative upsurge, independent thinking among students, but limits the possibility of obtaining the necessary program material. For the most effective approach in teaching the course "Botany" is a combination of traditional and innovative technologies such as mini-cases and training in the community, allowing students to learn the program material with the manifestation of creative activity. Thus, the analysis of the literature and work experience testify to the active introduction of information and communication technologies in education. All of the above allows us to draw conclusions.

1. Conducting traditional training involves obtaining more information on the topic of the lesson than non-traditional methods.

**RECOMMENDED READING**

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