# PEDAGOGICAL INNOVATION AND THE USE OF DEBATE METHOD IN TEACHING TECHNICAL SCIENCES

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## ANNOTATION

This article discusses the use of innovative technologies and the method of debate in the teaching of technical disciplines in higher education.

**Keywords: higher education, learning process, pedagogical innovations, interactive methods, technical disciplines, method, interactive method.**

## INTRODUCTION

The new approach to education, which is being introduced now and should be introduced in the future, should be based on the activity of a larger number of students, aimed at the formation of their independent educational needs and skills, based on innovative educational technologies. The teacher should move from the role of a transmitter to the role of organizing an active process of teaching students, managing their educational motivation and activities, psychological and pedagogical rational support and developing their existing needs for knowledge, free thinking, creativity, and innovation.

Naturally, the introduction of new educational technologies and advanced pedagogical innovations in educational practice in itself will not happen. In our opinion, there is a need for a scientific approach to the introduction of pedagogical innovations and an in-depth study of the factors affecting this process. In our opinion, the process of introducing pedagogical technologies can be considered as a process of innovation. In other words, "innovation" is a complex scientific process, which includes the creation, dissemination and application of new scientific, practical means to more fully meet new social needs. The innovation process can be divided into several stages:

1) study and identify needs;
2) creating or selecting innovations;
3) planning;
4) preparation for innovations; testing of innovations;
5) introduction;
6) analysis;
7) assessment.

At each stage of the innovation process, participants in this process should work in the following three areas: logistics; organization; social and psychological. The introduction of

any innovations, including the introduction of pedagogical technologies and their effectiveness, will depend on how members of the pedagogical community perceive innovations, how they relate to them.

Usually in the process of innovation there is a psychological barrier to innovation.

## MAIN PART

In social psychology, the origin and causes of this barrier have been deeply studied. The psychological barrier to innovation is reflected in the indifference or negative attitude of the people who own the innovation. It is observed that such a psychological barrier in people arises openly or implicitly.

Studies show that the successful implementation of pedagogical innovations in society and perceived effectiveness depends on a number of factors. They can be divided into three main groups:

1) factors associated with the characteristics of the proposed pedagogical technology. Perfection of innovations, scientific and practical validity, tested in practice, etc.

2) the emergence, development, how to introduce pedagogical technology, the provision of sufficient information about it, whether it was introduced step by step in the implementation, whether the introduction of pedagogical technology was supported financially;

3) factors associated with the socio-psychological characteristics of people involved in the implementation of pedagogical technologies and the pedagogical community. This group includes the attitude of the leaders of the pedagogical team to innovations, the level of their organization and managerial skills, management style, characteristics of the relationship between the manager and the staff, the socio-psychological climate in the team. This set of factors can also be called the innovative potential of the teaching team, that is, the ability to effectively implement and introduce innovations.

We conducted research in a number of institutions to examine the relationship between independent thinking and student talent in higher education and the innovative potential of faculty.

The following were accepted as empirical indicators of the innovative potential of the teaching staff:

- the willingness of members of the teaching staff to adopt the above pedagogical technologies, their attitude to innovations, knowledge of the purpose and content of pedagogical technologies, understanding of the importance of innovations.

- Socio-psychological characteristics of the faculty. The interaction of managers, staff and teachers in a team, team cohesion, the socio-psychological climate in the team, creative activity and much more. - personal and activity characteristics of the head of the teaching staff. Innovative orientation of the leader, innovative position, style of the leader, communicative knowledge of the leader and the compatibility of the team of leaders and so on.

Based on the results of the study, it was found that the introduction of pedagogical technologies in communities with high innovative potential is highly effective. In addition, the number of creatively talented students is significantly higher among students studying at

universities with innovative potential. Thus, the effective implementation of advanced pedagogical technologies creates the basis for the formation of creative abilities among students. Indeed, innovative educational technologies are characterized by the fact that they are more based on the activity of students, focusing on the formation of their independent educational needs and skills.

Based on the establishment of economic, social, political and scientific-educational ties with foreign countries, Uzbek scientists began to slowly go into our country using advanced and effective technologies. These include the concept of progressive educational technology in the world, which has come in the minds of our educational community. The practical use of pedagogical technologies is associated with the proper and targeted use of interactive teaching methods that guide students towards independent thinking. Interactive teaching methods can be divided into the following groups:

1. Mental attack;

2. Discussion in groups;

3. Work in small groups;

4. Role-playing and action games.

We would like to focus on the "group discussion" method, which is widely and effectively used not only in the teaching of socio-economic, but also in technical sciences. The lesson is planned in the following order.

1. Facilitator - the facilitator (teacher) selects a topic and invites participants.

2. The facilitator first gives the participants a brainstorming session and explains their rules:

- The purpose of the "attack" is to offer as many options for solving the problem as possible;

- Try to focus and express your thoughts with a focus on problem solving. Although the ideas expressed are contrary to general opinion, none of them are rejected;

- develop the ideas of other participants;

- Do not try to evaluate what is offered, you will do it later.

3. The newcomer selects an assistant and writes down any given ideas. During the discussion, the order of speakers will be established, all participants will be involved in the discussion and will have the opportunity to express their opinion. If someone violates the rules of "mental attack", the initiator immediately intervenes in the discussion. The first stage continues until new ideas emerge.

4. The beginner announces a short break to "sharpen" the critical thinking of the participants. Then the second stage begins. The participants of the "mental attack" group and consolidate the ideas expressed in the first stage.

Ideas are grouped, the authors begin to analyze them, and as a result, only those ideas that are relevant to solving the problem are separated. The initiator concludes the discussion. If a group has a dispute over a particular topic, you can find a solution to the problem using this method. It is often used in the introductory part of the lesson and demonstrates that there are different approaches to studying the topic being studied. This is on the one hand. Secondly, students will have the opportunity to express their opinions, improve their

communication skills. Thirdly, at the end of the lesson, the teacher clearly assesses the level of proficiency in the topic.

Exercise "Find how thoughtful you are."

1. Three papers willbe hanging in opposite corners of the office. One of them says "YES", the other - "NO", and the third - "?". Posters may also contain conflicting opinions expressed on issues on specific topics.

2. The rules for organizing the lesson are discussed.

3. Students are encouraged to move on to writing down ideas that matches their opinion.

4. Separated students are asked to substantiate their views. At this time, the transition from one group to another is allowed, and thus all students in the group participate.

5. After opinions on the problem have been expressed, there may be students who changed their views during the discussion and moved to another group. In such cases, they will have to justify the reasons for their relocation.

6. Participants are asked to identify students among their opponents who have the most convincing opinion about the problem.

We offer a note to the discussion participant:

1. Debate is a way of overcoming a flaw, not a solution to a discussion relationship.

2. Do not talk too much when expressing the opinions of others.

3. To achieve the goal in the mind, first think about your own words, use your excitement accordingly.

4. Try to understand your opponent and treat him with respect.

5. Refute evidence without the opinion of your opponent

6. Express your opinion only on the topic under discussion.

7. Influencing someone with your work.

The order and time of discussion are as follows:

1. The facilitator announces the topic of the lecture and gives the floor to the speaker.

2. The lecture lasts up to 8 minutes.

3. Reviewer will talk up to 5 minutes.

4. Group discussion up to 10 minutes. The results of the work in groups are evaluated by the teacher. In this case, the main criterion is the correct and accurate performance of the activity, time spent. When this method is used, the student has the right to think independently, take an active part in the lesson, play a leading role, learn from each other and evaluate different points of view.

**CONCLUSION**

This means that when using the "discussion" method in teaching technical subjects, the teacher will be able to save more time than other non-traditional methods. Because the teacher can engage and evaluate all students on the topic at the same time.

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