

IMPROVING THE METHODOLOGY OF TEACHING THE MECHANICAL SECTION IN INNOVATIVE EDUCATIONAL CONDITIONS

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Abstract. *This article deals with the innovative educational conditions that exist and should be created in modern educational institutions suitable for today's modern market conditions, including the methodology of teaching mechanics in higher education institutions as a result of these conditions. processes, opinions on issues of improvement of these processes take place. This article can be actively used by teachers-professors of higher educational institutions and students-masters studying the department of mechanics.*

Keywords: *modern education, innovative educational conditions, innovative educational environment, mechanics department teaching methodology, scientific and innovative activity, innovation.*

Today, every country strives to be competitive in the world education field with its qualified specialists and personnel. For this reason, it pays special attention to the issues of creating an innovative environment in any type of educational institutions operating on the territory of the country and expanding the level of knowledge of students in this environment.

The Republic of Uzbekistan is not an indifferent country regarding the same issue. That is, an innovative environment has been created for students to acquire knowledge on a large scale in the existing educational institutions of the state.

At the same time, along with the creation of an innovative environment operating on the scale of the republic, the activation of the innovative activities of educational institutions has become an objective need. The processes of creation and implementation of innovations also consist of certain cycles. From this point of view, the innovation cycle is a set of activities that continue consistently in time dimensions, acquire functionally separate content and differ from each other at different stages of the same importance.

The fundamental ideas and knowledge that serve as the basis for innovation and their practical application lead to the following results:

- identifying unpromising projects and making the right decision;
- further improvement in the process of putting the innovative idea into practice;
- there will be an opportunity to adapt the innovation to its technological features, to the nature of the systems responsible for management and organizational activity.

As a result of the above opinions, it should be said that innovations in the field of science and innovative environment, the development and improvement of innovative educational conditions have positive results in every branch and every direction of science. shows. In particular, in the conditions of innovative education, if attention is paid to the issues of teaching the department of mechanics and improving the methodology of teaching the department of mechanics, this will increase the interest in the department among the young people. can achieve high efficiency like promotion.

It would not be inappropriate to say that the mechanics department and the methodology of teaching the mechanics department, the improvement of the methodology of teaching the mechanics department are inseparable concepts. These relationships are reflected in the study and workplaces of educators and learners, in engineering research and development, but also in the teaching methods of those providing knowledge in the field of mechanics. In the conditions of innovative education, innovation in teaching methods in the field of mechanics is a mandatory activity for various reasons. First, innovation skills should be available to all higher education teachers, especially engineering teachers. Secondly, the structures, practices and methodologies of the existing educational systems should be sufficiently adapted to meet the educational needs of the knowledge society. In the second half of the last century, international thinking about education began to move to a new paradigm. This shift was driven by awareness of massive and ongoing social, economic, and technological change and the resulting exponential increase in human knowledge. International thinking has begun to explore questions about the role and purpose of education in a world of unprecedented levels of complexity, fluidity, and uncertainty. Answering these questions also applies to the mechanical field, which is considered one of the important parts of modern life today. For this reason, in the preparation of representatives of the field of mechanics who can answer complex questions clearly and correctly, in the innovative educational conditions created in accordance with the requirements of the time in higher education institutions, the work of improving the teaching methodology of the department of mechanics should be given deep attention. It should not be overlooked that students (and teachers alike) need some support to actively develop the skills needed to effectively engage in solving these problems from a mechanical perspective. Third, future engineers should also be challenged to become highly skilled professionals who will need to lead companies in their careers. It should be emphasized that these specialists are expected to develop creative ideas and innovations to achieve competitive advantages and new business opportunities.

In recent years, the problem of improving the quality of education is actively developing based on the use of the latest achievements of pedagogy, psychology, informatics and the theory of cognitive activity management. In connection with the superiority of the student-oriented approach in higher education, the transition to humanistic methods of teaching and the development of the student's personality were determined. Today, it is not enough to provide a student with this or that amount of knowledge, it is necessary to ensure the achievement of the level of individual development that fully corresponds to their capabilities and needs. In particular, one of the directions of improvement of the country's education system is the development and introduction of new pedagogical technologies, the basis of which is student-oriented education and science, taking into account the individual characteristics of students. is the transition to based education. Paying attention to personal development and self-development is not an exception, of course. The goal of learning and teaching is not to form students' basic knowledge of science, but to develop their ability to learn and improve independently, that is, to master the methods of educational activity.

Based on these, it is necessary to resolve the following contradiction: the contradiction between the standard requirements for the knowledge and skills of a graduate of a primary school in mechanics and the requirements of the modern student-oriented educational paradigm; a traditional approach to the learning process that prioritizes the independent work of students for self-development and learning, and does not meet these requirements.

Next time, it is necessary to take various "*modern steps*" to improve the teaching and learning methodology of the mechanical department as a result of effective use of the innovative conditions created in higher education. It is natural to ask the question: "*What are the modern steps?*"

In fact, it is not such a complex concept or phrase. It just means keeping up with the times. To put it more simply, it can be said to be effective use of various innovations or integrated methods that are actively used in the world education system at the same time. That is, in the conditions of innovative education, to improve the teaching methodology of the department of mechanics, it means to add some novelty to the methods that are constantly used, and to give knowledge to students using integration. And this only serves as a small corridor to achieve an unattainable result.

The decree of the President of the Republic of Uzbekistan dated March 19, 2021 No. PD-5032, as a corridor with such wide possibilities, opened a new era in the development of the field of physics. At the same time, it was mentioned in the decision that there are a number of issues that have not been resolved in the field, and they present a number of issues that need to be resolved.

In order to ensure the implementation of this decision, at the same time, to improve the quality of physics teaching in educational institutions, to introduce modern teaching methods into the educational process, to select talented students, to train competitive specialists for the labor market, to promote scientific research and innovation. great attention is being paid to the development and practical effectiveness. Fundamentally improving the quality of education in physics, training highly qualified pedagogues and scientific staff, providing educational institutions with modern laboratories, textbooks and other educational equipment, developing the potential of scientific organizations, effectively organizing their activities, It can be seen in important works, such as the establishment of close communication and cooperation between the fields of science and production.

As a short summary of the above comments, it can be said that in every educational institution where there is an innovative educational environment, it is possible to apply unused methods of improving the teaching methodology of the mechanics department and achieve results. Because innovative educational conditions are the presence of new innovations; box of possibilities for implementation; It is also a great way to become a place of success.

REFERENCES

1. Decision of the President of the Republic of Uzbekistan, Decision No. PQ-5032 dated 03.19.2021.
2. Burkhonov, A., Avlaev, O., Abdjalilova, S., & Otaev, A. (2021). Responsibility as a criterion for determining personal maturity. In *E3S Web of Conferences* (Vol. 244, p. 11059). EDP Sciences.
3. García-Peñalvo, F. J., & Colomo-Palacios, R. (2015). Innovative teaching methods in Engineering. *International Journal of Engineering Education (IJEE)*, 31(3), 689-693.
4. Уроков А., Федотов И.В. Методы и модели оптимизации управленческих решений. Учебное пособие. - М.: Дело АНХ, 2009. -240 стр.
5. R. Colomo-Palacios, C. Casado-Lumbreras, P. Soto-Acosta, F.J. García-Peñalvo, and E. Tovar-Caro, Competence gaps in software personnel. A multi-organizational study,

- Computers in Human Behavior, 29(2), 2013, pp. 456-461, doi: <http://dx.doi.org/10.1016/j.chb.2012.04.021>
6. F. J. García-Peñalvo, Multiculturalism in Technology-Based Education. Case Studies on ICT-Supported Approaches, Information Science Reference, Hershey, PA, USA, 2013
 7. F. J. García-Peñalvo, A. Sarasa Cabezuelo and J. L. Sierra González, Innovating in the Engineering Processes: Engineering as a Means of Innovation, IEEE Revista Iberoamericana de Tecnologías del Aprendizaje (IEEE RITA), 9(4), 2014, pp. 131–132, doi: 10.1109/RITA.2014.2363004.
 8. <https://lex.uz/>