

TRIZ SUMMIT 2024



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Ahmadova
Saida

**TRIZ for the development of a culture of
creative thinking among students of the
National Aviation Academy.**



- The history of TRIZ, created in the depths of the science of technology, began from the moment when its author G.S. Altshuller formulated the main postulate: "Technical systems develop according to objectively existing dialectical laws. These laws can be used for conscious - even invisible enumeration of options - the development of technical systems and the solution of inventive problems."

- This integration is determined by the general direction of the laws: TRIZ defines the laws of development of technical systems, and pedagogy and pedagogical anthropology are looking for the laws of personality development. G.V. Terekhova states that historically, integration was recorded by the concept of "TRIZ education" in the mid-90s of the twentieth century during the introduction of educational concepts proposed for development by G.S. Altshuller. It was during this period that elements of the theory of inventive problem solving began to be actively introduced into the education system.

- Main areas of integration:
- – development of programs for mastering TRIZ as a new educational content that is as close as possible to the basics of TRIZ for different levels of education;
- – use of open problems (containing an obvious or hidden contradiction), non-algorithmic methods (methods of activating thinking) that do not require adaptation of TRIZ elements for different age groups in subject educational areas;
- – development of methods and technologies for teaching problem solving or developing the creative potential of educational subjects based on TRIZ.

- The presented publication is a continuation of the author's work on the implementation of the idea of forming a culture of creative thinking in students in the engineering field, as a conscious, purposeful, controlled process. The formation of a culture of thinking in the learning process will occur in the presence of real problems in the educational material and methods for solving them. As noted in the article on the use of TRIZ, in the presence of a contradiction or simply a design defect, this can be interpreted as a "revolutionary situation" where the inventor has the opportunity to solve it. This "revolutionary situation" must be artificially created in order to teach students aviation problems with the help of TRIZ.

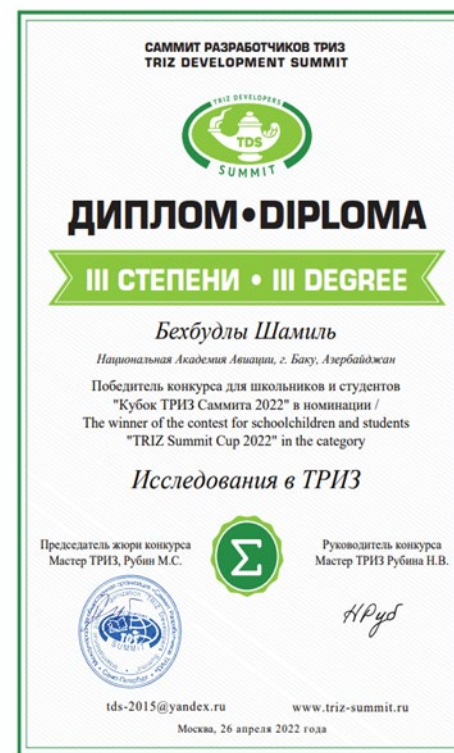
- As a result, the teacher, who presents the final result with a sufficient degree of probability, directs his/her activity to the organization of the trainee's thinking based on TRIZ. Taking into account the insufficient practical experience and knowledge base of the students, the educational tasks should not be too complicated. As a result of searching for such tasks, the variants of fairly simple (if not primitive) devices from the textbook were taken as a basis. These variants, as well as a number of technical shortcomings, were adjusted, weakening the technical means or creating uncertainty of the necessary constructive interventions. At the same time, the student, with a little prompting, is offered to find the design shortcomings and develop proposals for their elimination, without limiting himself/herself in the choice of methods for solving this problem.

- Basically, the presented task is to identify the shortcomings in the working environment. They are in the following areas:
- production problems;
- technological and spatial difficulties of working in the environment;
- ensuring cooperation;
- optimization of technical means;
- problems of ensuring reliable operation of technical means.
- The student uses this list at the initial stage of the task analysis.

- Applicants from various specialties were selected to participate in the seminar. Information about the life strategy of a creative person was met with great interest by the participants.



- TRIZ Club members were awarded for participation in the International Invention Competition "TRIZ Cup 2022".



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За вклад в развитие ТРИЗ-образования

Председатель жюри конкурса
Мастер ТРИЗ, Рубин М.С.




Руководитель конкурса
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tds-2015@yandex.ru www.triz-summit.ru
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Мастер ТРИЗ, Рубин М.С.




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- Every year, lectures and seminars are organized for members of the TRIZ Club in preparation for the international invention competition “TRIZ Cup”.



- Клуб ТРИЗ ежемесячно организует приглашение выдающихся ученых. На вопросы учащихся даны ответы. Проводятся научные дискуссии.



Meetings between students of the Baku European Higher School and students of the TRIZ club often take place. Students get acquainted with the aviation museum, the aircraft modeling laboratory, and the student creative house. They participate in conferences related to the TRIZ theory.



- In addition to classes for students working in the TRIZ club, lectures on TRIZ theory are held.



- TRIZ club members actively participate in various scientific festivals and events.



- TRIZ Club members gave a lecture on 5 topics in preparation for the International Invention Competition "TRiZ Cup 2023". Various scientific discussion seminars were organized.



- 20 members of the TRIZ club prepared 4 teams for the International Invention Competition "TRIZ CUP 2023". At the competition, they prepared projects reflecting ways to solve problems in aviation. Each participant in the competition was awarded a certificate.



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Q&A SESSION



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THANK YOU!
Спасибо!

