



## METHODOLOGY OF FORMING TECHNICAL THINKING OF CADETS IN THE ENVIRONMENT OF THE MILITARY EDITORIAL EDUCATION CLUSTER

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<https://doi.org/10.5281/zenodo.8361834>

**Annotation:** The article talks about technologies for the formation of technical thinking among cadets of engineering specialties of military education in the process of teaching technical sciences.

**Key words:** military education, technical sciences, engineer, cloud technologies, scammer technologies, shaping factors.

The theory and practice of education in higher military educational institutions of the Republic of Uzbekistan requires special efforts to form technical thinking in cadets. During the solution of this issue, there was a need to select methodical approaches describing the direction of our scientific research and its results.

Cloud technologies - the most convenient way to organize a single information environment available on all types of devices (personal computers, laptops, tablets, and smartphones) is the use of cloud technologies. The didactic possibilities of cloud technologies that confirm the expediency of using digital technologies in the educational process of modern higher educational institutions include:

- the possibility of organizing the joint work of a team of teachers and cadets;
- the possibility of sharing and publishing documents of various types and purposes for both teachers and trainees;
- quick inclusion of the created products in the educational program;
- the user stops the service due to the lack of territorial obligation to the place where it is provided;
- organization of interactive lessons and collective training;
- cadets perform independent work, including team projects, without restrictions on "audience size" and "session time";
- to interact and work together in the circle of peers, regardless of their location;
- creation of web-oriented laboratories in specific rredmet areas (mechanisms for adding new resources);
- interactive access to modeling tools;
- information resources;
- user support;
- organization of various forms of control;
- moving educational management systems used by institutions to their own page (for example, HEMIS information system);
- new opportunities for researchers to organize, develop and disseminate access to practical models.

Creating a cloud-based information learning environment with the ability to access it through a mobile device ensured that "three main functions" were fulfilled.

- resource - placement and storage of educational content;
- communication - firstly, access to teachers and trainees at any time; secondly, communication between subjects of the educational process;
- organizational and management - management of the course of the educational process by the teacher:

The use of mobile devices in combination with cloud services has made it possible to:

- organization of joint activities of cadets both during the lesson and during homework;- to interact and work together in the circle of peers, regardless of their location;
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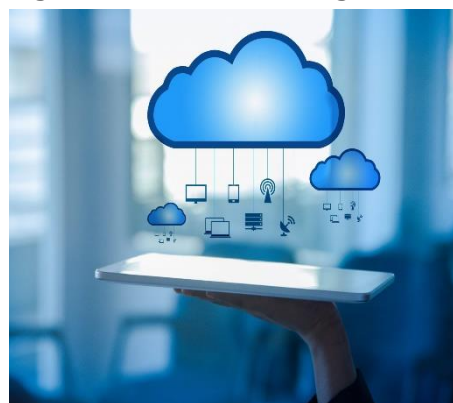
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The use of mobile devices in combination with cloud services has made it possible to:

- organization of joint activities of cadets both during the lesson and during homework;
- providing a single repository of information resources developed by cadets;
- get the right to access the course materials at any time and in any place;
- to increase the level of cooperation between cadets by implementing collective project activities;
- ensuring the relationship between parents and OTM (for example, by giving parents access to the page).

Thus, the described various didactic possibilities of digital technologies allow to develop a certain educational subject, in particular, to develop communicative competencies in students and to conduct research on the creation of a system of mobile educational methods.

Scamrer technology - SCAMRER mnemonic scheme substitute, combine, adart, modify, maximize/minimize, rut to other uses We succeeded in forming the technical thinking of the



cadets based on the use of strategies such as (apply), eliminate (prevent) and rearrange (change the application).

Table-1

### Basics of formation of technical thinking in cadets based on application of SCAMRER strategy

The use of the SCAMRER mnemonic scheme in the formation of the technical thinking of cadets in the improvement of practical professional training

SCAMPER	Questions	Tasks
Substitute	Think about what motions and properties are involved in the simplest cases of a solid.	Make a list of options and choose one and look for ways to improve it
Combine	Create a mathematical model of the properties of forward and rotational motion and their relationship.	Make a list of options and choose one to incorporate a new effective idea into the process
Adapt	Make a table of relations of kinematic characteristics between forward and rotational movements.	Make a list of options and choose one and describe it
Modify	Draw relationships between velocities and accelerations in forward and circular motion.	Make a list of options and choose one and describe it
Put to other uses	Describe the applications of the properties of forward and circular motion in engineering.	Make a list of options
Eliminate	What conditions must be satisfied by the normal and normal accelerations of a point in order for its motion to consist of rectilinear plane motion?	Make a list of options
Rearrange	How does the kinematic characteristic of a point change if its trajectory changes from a straight line to a curve?	Make a list of options

This strategy helps you make connections between events and concepts by thinking flexibly. The SCAMRER mnemonic scheme developed by Eberle is substitute, combine, adapt, modify, put to other uses, eliminate, and We managed to develop technical creative thinking skills in cadets based on the use of strategies such as rearrangement.

As mentioned earlier, a SCAMRER is a series of questions to be asked in a brainstorming session (searching for new ideas). Like any other tool, this strategy will work effectively if the following conditions are met:

- the trainee understands the problem and can write it down (try to use intelligent criteria for writing);
- the cadet goes beyond his "standards" and uniformity;
- do not criticize the answers during the search for ideas.

The problem can be different - to create a technology with high production efficiency, to look for new types of engineering projects, etc. The main thing is to formulate it as accurately as possible. It is necessary to try to emphasize the object and topic of the problem.

Thus, digital technologies provide a high level of collaboration by providing networking tools. At the same time, the use of digital technologies in teaching is inextricably linked with the use of cloud information and educational environments.

The conclusion is that it is advisable to strengthen the knowledge and skills of the cadets on a specific subject during practical training. In order to develop the technical thinking of cadets, it is necessary to use active methods that encourage them to think more blindly.

**In the formation of the technical thinking of future military engineers, first of all, in the teaching of science blocks, comretions (edagogical, design, research, military engineering, modeling) educational forms (lecture, practical, group, independent training, educational practice) training was carried out with the support of innovative educational technologies.**

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